INFORMATION COLLECTION REQUEST

U.S. ENVIRONMENTAL PROTECTION AGENCY
COLLECTION OF 1997 IRON AND STEEL INDUSTRY DATA

EPA ICR 1830.01

MARCH 1998

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1. IDENTIFICATION OF THE INFORMATION COLLECTION

1(a) TITLE OF THE INFORMATION COLLECTION

U.S. Environmental Protection Agency
Collection of 1997 Iron and Steel Industry Data
EPA ICR 1830.01

1(b) SHORT CHARACTERIZATION / ABSTRACT

The United States Environmental Protection Agency (EPA or the Agency), through this Information Collection Request (ICR) package, requests that the Office of Management and Budget (OMB) review and approve the Collection of 1997 Iron and Steel Industry Data. Through this collection, the Agency will obtain data essential to the review and revision of the Iron and Steel Manufacturing Effluent Limitations Guidelines (40 CFR Part 420). This data collection is authorized by Section 308 of the Clean Water Act (CWA).

The Engineering and Analysis Division (EAD) of EPA's Office of Water will administer the Collection of 1997 Iron and Steel Industry Data as a census of the iron and steel industry. The detailed Collection of 1997 Iron and Steel Industry Data (Detailed Survey), located in Attachment 1, is designed to collect technical and economic data from all iron and steel manufacturing operations. EPA will administer the Detailed Survey to 244 sites that are expected to have large flows and pollutant loadings. EPA made this assessment of sites based on the manufacturing processes performed and the products manufactured at each site. The condensed Collection of 1997 Iron and Steel Industry Data - Short Form (Short Survey), located in Attachment 2, is designed to collect technical and economic data from forming and finishing operations related to iron and steelmaking operations. EPA will administer the Short Survey to 657 sites that are expected to have relatively lower flows and pollutant loadings. Responses to this census (i.e., the Detailed and Short Surveys) will include all 901 iron and steel sites in the industry.

Following the receipt of responses from the Detailed Survey and the Short Survey, EPA will administer one additional survey. The Collection of Iron and Steel Industry Wastewater Treatment Capital Cost Data (Cost Survey), located in Attachment 3, is designed to collect cost data specific to wastewater treatment systems implementing candidate control technologies for regulatory options from no more than 100 sites. EPA also anticipates sending two follow-up questions to a subset of the industry based on responses to the surveys. The first follow-up question will collect monthly production hours corresponding with production data provided in the Detailed Survey and the Short Survey. EPA will use these data to develop a reasonable measure of actual production for the purposes of establishing site-specific limitations and standards. No more than 100 sites will receive this follow-up question. The second follow-up question will collect compliance and other monitoring data in the form of individual data points based on EPA's review of summary data provided in the Detailed and Short Surveys. EPA needs individual monitoring measurements in order to conduct engineering analyses (e.g., estimating

baseline pollutant loadings) and statistical analyses (e.g., variability). No more than 100 sites will receive this follow-up question.

EPA has determined that the data obtained through the Collection of 1997 Iron and Steel Industry Data is necessary for EPA to review and revise the effluent limitations guidelines and standards for the iron and steel industry. These data will be used to perform detailed technical and economic analyses that will support the Agency's development of technically achievable regulatory options for the iron and steel industry. Ultimately, EPA will select appropriate regulatory options based on economic achievability, implementation issues, cost-effectiveness, and projected environmental benefits associated with the options.

The iron and steel industry will devote time and resources to respond to the Collection of 1997 Iron and Steel Industry Data. EPA estimates that this census will involve 901 respondents and place a total burden of 107,116 hours on the iron and steel industry. The collection design represents a culmination of the Agency's efforts not only to gather sufficient data to perform the analyses required by the CWA, related Acts (e.g., Small Business Regulatory Enforcement Flexibility Act (SBREFA)), and various executive orders, but also to cooperate with the iron and steel industry to administer a clear and concise data collection that places the lowest possible burden on all respondents.

2. NEED FOR AND USE OF THE COLLECTION

2(a) NEED / AUTHORITY FOR THE COLLECTION

The Federal Water Pollution Control Act Amendments of 1972 ("Clean Water Act," or CWA), 33 U.S.C. 1251 et seq., established a comprehensive program to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (Section 101(a)). Under the authority of the Act, EPA is required to issue effluent limitations guidelines, pretreatment standards, and new source performance standards for industries that generate wastewater. Section 304(m) of the CWA, added by the Water Quality Act of 1987 (P.L. 100-4, February 4, 1987), calls for EPA to publish biennial effluent guidelines plans, and to establish a schedule for the review and revision of promulgated guidelines.

The Agency published its first biennial plan on January 2, 1990 (55 FR 80). The Natural Resources Defense Council (NRDC) and others filed suit against EPA for alleged inadequacies in the plan. See NRDC, et al. v Reilly, Civ. No. 89-2980 (D.C. Cir.). The court-approved consent decree between EPA and NRDC (January 31, 1992) required the Agency to propose and take final action on seven effluent guidelines already under development, four effluent guidelines already identified, and eight additional effluent guidelines that had not yet been identified by EPA.

In accordance with Section 304 (m) of the CWA, EPA is reviewing the Iron and Steel Manufacturing Effluent Limitations Guidelines and Standards (40 CFR Part 420). The Agency completed a preliminary study of the industry in 1995 (EPA 821-R-95-037, September 1995), and found that since the promulgation of these regulations in 1982 (and amended in 1984), the iron and steel industry has made improvements in manufacturing techniques, water

conservation, pollution prevention, and wastewater treatment practices. The Collection of 1997 Iron and Steel Industry Data is an essential portion of the detailed information gathering process necessary for EPA to determine if the current iron and steel regulations remain appropriate in light of changes throughout the industry.

EPA plans to conduct a mail census of all sites conducting operations that fall within the iron and steel industry, including all sites that are currently regulated by 40 CFR Part 420. The survey requests data for 1997, the most recent year for which complete technical and economic data are available. The Agency believes a census is necessary to collect the necessary data to evaluate all operations that occur in this industry. The 1982 regulation did not specifically gather data from or address small, stand-alone steel finishing operations. These facilities may not be characteristic of the larger facilities which were used to establish the 1982 rule. In addition, the current subcategorization scheme may not adequately address all types of iron and steel sites (e.g., non-integrated steel sites, continuous strip steel finishing lines). For more discussion on why a census of this industry is warranted, please see Section 2(b) and Section 5(c).

The data collection will be administered under the authority of Section 308 of the Federal Water Pollution Control Act, 33 U.S.C., Section 1318.

2(b) PRACTICAL UTILITY / USERS OF THE DATA

Under the effluent guidelines program, EPA must establish technology-based limitations guidelines (based on the Best Practicable Control Technology (BPT), Best Conventional Control Technology (BCT), and Best Available Technology Economically Achievable (BAT)), and standards (Pretreatment Standards for Existing Sources (PSES), New Source Performance Standards (NSPS), and Pretreatment Standards for New Sources (PSNS)). BPT, BCT, BAT, and NSPS apply to direct dischargers (i.e., sites that discharge directly to navigable waters of the United States), while PSES and PSNS apply to indirect dischargers (i.e., sites that discharge to publicly owned treatment works (POTWs).

To develop technology-based limitations and standards, EPA will collect and analyze information pertaining to wastewater characteristics (e.g., pollutants discharged, wastewater flows), wastewater treatment technologies (e.g., pollution prevention techniques, end-of-pipe treatment systems), and the economic impacts of these treatment technologies. Specifically, to develop effluent limitations guidelines and standards for the iron and steel industry, EPA will use responses to the Collection of 1997 Iron and Steel Industry Data to assist in characterizing the pollution discharged from iron and steel sites and to develop regulatory options to control these pollutant discharges. The Agency will use the data collected to assist in establishing current baseline estimates of industry-wide production-normalized wastewater flow rates, pollutant concentrations, and pollutant loadings in order to estimate the engineering costs of compliance and analyze the economic impacts and environmental benefits associated with each regulatory option. EPA will select appropriate regulatory options for the iron and steel industry based on the results of these analyses.

EPA plans to conduct a mail census of the Collection of 1997 Iron and Steel Industry Data to gather the data necessary to complete these analyses. A census, rather than a

statistical sample, is necessary to obtain information for all iron and steel operations because of the size and complexity of these operations. The surveys will be sent to 12 manufacturing configurations, which make up the iron and steel industry:

- Integrated steel sites with cokemaking (10 sites);
- Integrated steel sites without cokemaking (11 sites);
- Non-integrated steel sites with finishing (32 sites);
- Non-integrated steel sites without finishing (95 sites);
- Stand-alone cokemaking sites (18 sites);
- Stand-alone direct-reduced ironmaking or sintering sites (3 sites);
- Stand-alone finishing sites (35 sites);
- Stand-alone hot forming sites (40 sites);
- Stand-alone cold forming sites (69 sites);
- Stand-alone pipe and tube sites (179 sites);
- Stand-alone hot dip coating sites (109 sites); and
- Stand-alone wire sites (300 sites).

Figure 2-1 presents a simplified schematic diagram of iron and steelmaking operations, while Figure 2-2 presents a simplified schematic diagram of forming and finishing operations. These figures are typical of most operations at iron and steel sites. Integrated steel sites can perform all operations shown on these figures, from cokemaking and sintering, to iron and steelmaking (typically using basic oxygen furnaces), to casting, to forming and finishing. Non-integrated steel sites begin their operations with steelmaking, typically using an electric arc furnace. However, these sites can also perform many operations, from steelmaking, to casting, to forming and finishing. These figures are considered simplified because they only list the operation performed and they do not show the flow of water in these operations. Iron and steel sites typically reuse water from one process to another; a census is needed to capture specific information on how water may be cascaded from operation to operation, and ultimately treated and discharged or disposed.

A census is also needed to streamline and simplify the current effluent limitations guidelines and standards for this industry. The current industry subcategorization scheme includes 12 subcategories, which consist of 25 subdivisions and 56 segments. One of the Agency's goals during revision of these guidelines is to reorganize this subcategorization to more effectively regulate non-integrated steel sites, to include steel finishing operations, to address new continuous strip steel finishing mills, and to delete obsolete manufacturing processes. EPA needs certain production and process information from each site to properly restructure the subcategorization scheme. Therefore, EPA developed two surveys (the Detailed and Short Surveys) to gather this information, while minimizing burden on those sites that are expected to contribute relatively low wastewater flows and pollutant loadings.

[insert Figure 2-1]

[insert Figure 2-2]

A census is also necessary because of the variability in certain key site characteristics:

- Types of steel produced. The three principal types of steel produced include carbon steel, stainless steel, and alloy steel. These steel products contain a wide range of constituents, including carbon, chromium, manganese, silicon, copper, aluminum, nickel, and various other alloying elements, which directly affect the wastewater characteristics and pollutant loadings generated.

- Types of shapes produced. Steel products are produced in a wide range of shapes (e.g., plate, sheet, structural shapes, bar, wire, tubes), which directly affect the volume of wastewater generated per unit of production. For example, wire operations are likely to generate higher volumes of wastewater per pound of wire produced than operations that produce structural beams.

- Types of coatings. Steel products can be finished using a variety of coatings (e.g., zinc, aluminum, tin, lead, chromium, etc.), which directly affect the wastewater characteristics and pollutant loadings generated.

- Control technologies and pollution prevention and management practices. Some sites have implemented control technologies and/or pollution prevention and management practices that allow for greater reuse or recycle of process wastewaters (e.g., high-rate recycle systems, cascading of manufacturing process discharges, management of rolling solutions, or collection and treatment of storm water). In some cases, the implementation of these practices has allowed sites to operate at or near zero discharge of process wastewaters. A census would ensure that EPA identifies all such innovative technologies and practices, as well as the data necessary to determine which sites may require upgrades and the cost to install those upgrades.

These characteristics contribute to subcategorization, estimates of pollutant loadings, and estimates of compliance costs associated with proposed regulatory options. It is important that EPA fully understand these differences to construct subcategories that are meaningful, and effluent limitations guidelines and standards that incorporate the differences in production.

In addition, the Regulatory Flexibility Act (as amended by the Small Business Regulatory Enforcement Flexibility Act (SBREFA)) generally requires EPA to determine whether the rule will have a significant economic impact on a substantial number of small entities. EPA, therefore, needs an accurate count of the number of small businesses, and needs to be able to map costs for all sites back to the company that owns them.

(i) Analyses Supported by the Collection of 1997 Iron and Steel Industry Data

(a) Detailed Technical Analyses Supported by Part A of the Collection of 1997 Iron and Steel Industry Data (Detailed Survey and Short Survey)

EPA engineers, economists, statisticians, and contractors will perform detailed analyses of the data collected through Part A of the Detailed Survey and the Short Survey. The technical data will include basic site information, manufacturing process information, detailed water use data, wastewater characterization summaries, detailed wastewater treatment system data, and pollution prevention data. Specific analyses using the technical data are described below.

(i) Subcategorization

In the effluent guidelines program, subcategorization of an industrial category is often based on site size, location, activity, and age; raw materials used; products and by-products generated; total energy requirements; air pollution control methods; water use practices; wastewater characteristics; manufacturing processes; or non-water quality impacts. EPA will review the technical data collected through Part A of the Detailed Survey and Short Survey to determine the appropriate subcategorization for the iron and steel industry.

(ii) Evaluation of Iron and Steel Processes and Wastewaters

EPA will use data collected through the Detailed Survey and the Short Survey to analyze iron and steel industry manufacturing processes, pollution prevention practices, and wastewater treatment systems. Specifically, EPA will analyze each manufacturing process, including the water use, production, and wastewater discharge rates; pollution prevention techniques associated with each process; and the characteristics of wastewater generated from each process. EPA will also analyze plant-wide pollution prevention practices and wastewater treatment systems to determine the wastewaters that require treatment, the treatment technologies that are applicable to those wastewaters, the effectiveness of these systems, and the final discharge characteristics from iron and steel sites.

(iii) Technical Feasibility Analysis

EPA will select technically feasible technology options, including control technologies and pollution prevention and recycle practices, for all subcategories. The Agency will assess the technical feasibility of each technology option by determining its availability within the industry, as well as the degree to which it effectively eliminates the generation of pollutants and/or removes or destroys specific pollutants.

(iv) Assessment of Technology Costs

EPA will use data collected through the Detailed Survey and the Short Survey to estimate the direct costs of the wastewater treatment and control technologies and pollution prevention/management practices selected as the technology basis options for iron and steel

effluent guidelines. These data include wastewater flow rates, production rates, data related to treatment technologies already in place, and pollutant concentrations. EPA will use data collected through the Detailed Survey and the Short Survey to assess the following direct costs: treatment equipment capital costs; expenses associated with engineering design of the equipment; installation costs, including utility connections; expenses for floor space or land to install the equipment; annual operating expenses (e.g., power costs, chemical costs); equipment maintenance costs; equipment operator salary expenses (e.g., salary, benefits, overhead charges); and waste disposal costs. Actual capital cost data from iron and steel sites will be collected separately (see Section 2(b)(ii)).

(v) Calculation of Effluent Limitations

EPA will develop preliminary effluent limitations guidelines and standards for each technology option it has developed. The Agency will base these preliminary limitations upon a detailed statistical analysis of treated effluent data from sites that implement the recommended control technologies and pollution prevention/management practices and that have well-operated treatment systems. EPA will develop preliminary effluent limitations for maximum daily and average monthly discharge levels.

In addition, EPA will evaluate the volume of wastewater, as well as mass of pollutant, generated per ton of product (e.g., gallons of wastewater per ton of steel manufactured, pounds of ammonia generated per ton of coke produced). This evaluation will be used to determine if certain product types (e.g., coke, steel, iron), types of steel (e.g., carbon, alloy, stainless), or product shapes (e.g., bars, rods, plate) generate different types of wastewater, and if subcategorization is appropriate. EPA will develop production-normalized flows and/or pollutant loadings on which to base the limitations calculations for each subcategory.

(vi) Environmental Assessment

EPA will perform an environmental assessment to determine the potential impacts of iron and steel industrial discharges on aquatic life and human health, as well as on the proper operation of POTWs and other treatment works. This assessment will characterize the potential risk posed by the discharges and will assist the Agency in projecting the environmental and economic benefits of the regulation.

(vii) Development of Regulatory Options and Selection of Final Option

After technology options are assessed, preliminary effluent limitations are calculated, and economic analyses are performed, EPA will develop regulatory options. For each option, EPA will assess the amount of each pollutant removed, the potential costs to the industry, the economic impacts of these costs on businesses (e.g., if businesses may be forced to close because of the regulatory costs), the cost-effectiveness, and the non-water quality impacts. Based upon these assessments, EPA will select the best regulatory option for each type of guideline or standard for each subcategory of the iron and steel industry.

(b) Detailed Economic Analyses Supported by Part B of the Collection of 1997 Iron and Steel Industry Data (Detailed Survey)

EPA economists, statisticians, and contractors will perform detailed analyses of the data collected through Part B of the Detailed Survey and the Short Survey. The economic data from the Detailed Survey will include corporate structure; discount rate; value of shipments to other facilities under the same ownership; value of exports; quantities produced; income statement information such as revenues, costs, interest, depreciation, taxes, and net income; balance sheet information such as current and noncurrent assets; market value of equity; employment; tax assessment; and market value of noncurrent assets. These data are collected for two levels in the corporate hierarchy—the site and the business entity that operates the site. A limited set of data is requested for the third level in the corporate hierarchy—the corporate parent. Specific analyses using the economic data from the Detailed Survey are described below.

(i) Estimation of Impacts on Sites

One element of the economic analysis will be a determination of the proposed regulation's impacts on individual sites. The analysis will combine site-specific costs of compliance with site financial data for all sites in the industry. The results will be used to estimate the total costs and impacts of the proposed regulation.

A goal of the analysis will be to identify sites that might close due to pollution control requirements. A standard financial decision model would predict closure if the net present value of future income (net income or cash flow) from continued operations is less than the value of the site if operations were ceased (i.e., the value of the site following liquidation or salvage). The forecasted income for the site is a major determinant of the net present value of continued operations. The income projections are calculated using the revenue information collected in the Detailed Survey, including the tax status of the site or its business entity. An estimated percentage of costs that the market will allow to pass through to the consumer will be incorporated into the projected revenue estimates. To complete the closure analysis, the Detailed Survey also provides data relevant to calculating the salvage value of the site, such as current assets, book value of fixed assets, and the tax assessed value of land, buildings, and equipment. Direct losses in output, exports, revenue, and employment are calculated directly from the closure analysis results and survey responses.

(ii) Estimation of Impacts on Companies

The costs for all iron and steel sites that a given company owns will be estimated and aggregated. The combined cost to the company will be analyzed in the context of the company's financial status to evaluate the overall impact. The company-level impact analysis allows EPA to assess the effect of regulation at a different level of business organization. Where possible, the analysis will be performed with information for the business entity because financing decisions are commonly made at this level. In addition, the economic impacts of increased pollution control costs are more visible at this level because of the smaller asset and revenue base for financial ratio analysis. If the analysis is to be completed at the corporate parent level, the information will be derived from the financial statements requested in the survey. In the case of

single-establishment firms, this component of the analysis is unnecessary because site-level and company-level impacts will coincide.

Whenever possible, EPA will collect supporting data needed to assess company-level impacts from secondary sources to reduce the burden on survey recipients. Secondary sources provide data for multi-site, publicly reporting companies but are inadequate for single-site companies or multi-site, non-publicly reporting companies.

(iii) Estimation of Secondary Impacts

EPA will assess the secondary impacts of projected site closures on other segments of the economy. For example, employment losses and reductions in derived demand for input goods/services could potentially erode the economic condition of households and non-iron and steel firms in communities around closing iron and steel sites. Estimation of these community impacts depends upon employment and labor income data from the survey effort, macroeconomic multipliers, general economic data, and economic data from secondary sources. EPA also plans to consider the secondary impacts felt by small businesses and foreign trade. While the Detailed Survey requests data regarding employment, labor costs, and foreign trade issues, EPA will utilize secondary sources whenever possible during these analyses to minimize the burden placed upon survey recipients. Data from secondary sources will include detailed industry trade statistics, labor cost and commodity price indices, labor and commodity input requirement coefficients, regional income multipliers, regional employment, small business statistics, and other relevant secondary source information.

(c) Detailed Economic Analyses Supported by Part B of the Collection of 1997 Iron and Steel Industry Data - Short Form (Short Survey)

EPA will perform several different levels of economic analysis with the information collected in the Short Survey. A primary goal of the Short Survey is an accurate assessment of the number of small business entities potentially affected by the rulemaking. Because the Small Business Administration defines “small” by Standard Industrial Classification (SIC) code on the basis of the number of employees or revenues at the company level, EPA requests SIC code, the number of employees, and revenues for the company. EPA also requests the respondent to identify the type of corporation and whether it is public or private in order to better understand the financial information provided.

EPA requests revenues, costs, depreciation, and net income for both the company and site. EPA guidance recommends examining the percentage of sales formed by incremental pollution control costs when evaluating impacts on small entities. Where the net income and depreciation data are available at the site level, EPA can examine the site’s financial health before and after the imposition of incremental pollution control costs. Because only one year of data is collected, EPA does not anticipate developing forecasting methods for this part of the population. Instead, site financial distress caused by incremental pollution control costs will be evaluated against a single year’s cash flow. Direct losses on employment and output are calculated from projected site impacts.

EPA plans to evaluate the impact of the effluent guideline on companies. The company information collected in the Short Survey will be used to aggregate the costs for all sites owned by a company. The impact of the aggregate cost will be evaluated against the assets, revenues, cash flow, and financial ratios of the company derived from survey data.

For the population analyzed with the Short Survey, EPA will use data from secondary sources in combination with the results of the site impact analysis to estimate secondary impacts on employment and output.

(ii) Analyses Supported by the Collection of Iron and Steel Industry Wastewater Treatment Capital Cost Data

EPA will use data gathered through the Collection of Iron and Steel Industry Wastewater Treatment System Capital Cost Data to analyze the capital costs of recent system installations or system upgrades that use candidate technologies for regulatory options. These capital costs include the cost to install the equipment, as well as the expenses associated with engineering design. EPA will incorporate this actual capital cost data into a cost model, and/or will use these data to verify cost model output when input costs have been obtained from vendors.

(iii) Analyses Supported by the Production Follow-up Question to the Collection of 1997 Iron and Steel Industry Data

Section 122.45(b) of the NPDES permit regulations provides that production rates used to compute mass NPDES permit effluent limitations from production-based effluent limitations guidelines and standards "...shall be based not upon the design production capacity but rather upon a reasonable measure of actual production of the facility". For existing iron and steel sites, this regulation has most often been interpreted to mean the daily average production, assuming three turns of operation per day (three eight-hour operating shifts), for the month with the highest production that occurred over the five-year period prior to permit issuance.

NPDES permits and pretreatment limitations for iron and steel mills are typically not modified to account for changes in production resulting from the business cycle. Consequently, limitations and standards determined for a high production period can be inflated when applied during low production periods. This inflation becomes more pronounced when there are multiple steel operations in the same or different subcategories discharging to one on-site centralized wastewater treatment facility. In these cases, the production rates for the multiple operations may be determined from different maximum production months. Similarly, there are cases where different forming or finishing mills discharge to the same treatment facility, but cannot be operated simultaneously because of limited supplies of semi-finished steel. In these cases, inflation can occur if the limitations are derived as the sum of limitations for the individual production units.

EPA plans to evaluate a number of case studies to more fully examine the potential for inflation of NPDES limitations and pretreatment standards. To conduct this evaluation, EPA will collect in the Detailed Survey monthly production data by process for the previous five years (the Short Survey will collect monthly production data for one year) to understand how permit

limitations are currently developed. Based on responses to the Detailed and Short Surveys, EPA will then choose up to 100 sites to receive a Production Follow-up Question, which will request monthly operating hours, in order for EPA to evaluate other production bases for permit limitation development.

(iv) Analyses Supported by the Analytical Data Follow-up Question to the Collection of 1997 Iron and Steel Industry Data

EPA will use data gathered through the analytical data follow-up question to the Detailed Survey and the Short Survey to assist in estimating baseline pollutant loadings and pollutant removals associated with proposed regulatory options, as well as to evaluate the variability associated with iron and steel industry discharges.

3. NONDUPLICATION, CONSULTATION, AND OTHER COLLECTION CRITERIA

3(a) NONDUPLICATION

The Engineering and Analysis Division (EAD) of the Agency's Office of Water has made every reasonable attempt to ensure that the Collection of 1997 Iron and Steel Industry Data does not request data and information currently available through less burdensome mechanisms. Specifically, EAD has explored Agency databases, directories, contacts, and sources to locate data and information significant to the regulatory development process. In addition, the Agency has conducted a thorough collection and review of secondary sources, which include data, reports, and analyses published by government agencies; reports and analyses published by the iron and steel industry and its associated organizations; and publicly available financial information compiled by both government and private organizations.

The Agency has gathered technical information from iron and steel industry trade journals published from 1985 through 1997. Trade journals that EPA has consulted include *Iron and Steel Engineer*, published by the Association of Iron and Steel Engineers (AISE); *Iron and Steelmaker*, published by the Iron and Steel Society (ISS); and *New Steel* (formerly *Iron Age*), published by Chilton Publications. These sources provide background information on industry storm water and wastewater issues; existing wastewater treatment technology; wastewater treatment and manufacturing equipment upgrades and installations; and company mergers, acquisitions, and joint ventures.

The Agency has searched for data and information in Iron and Steel Society Conference Proceedings, including Electric Furnace Annual Conference Proceedings (1985, 1992-1994), Ironmaking Annual Conference Proceedings (1990, 1993-1996), Steelmaking Annual Conference Proceedings (1987, 1989, 1993-1996), and Mechanical Working and Steel Processing Proceedings (1993-1996). These proceedings provide information on potential and existing pollution prevention practices, new and existing wastewater treatment technology, and manufacturing equipment operating practices within the iron and steel industry.

The Agency has performed keyword searches for information in the on-line databases presented in Table 3-1.

TABLE 3-1
ON-LINE DATABASE KEYWORD SEARCHES

Database Source	Keywords Searched
Pollution Abstracts - Internet Connection Water Resources Abstracts - Internet Connection Engineering Index - Internet Connection Materials Business File - Internet Connection NTIS - DIALOG Enviroline - DIALOG Compendex - Internet Connection Metadex - Internet Connection	Pollution Prevention and Iron and Steel Industry Wastewater Treatment and Iron and Steel Industry Effluent Treatment Upgrades and Iron and Steel Industry Clean Plant Design and Iron and Steel Industry Zero Discharge and Iron and Steel Industry Wastewater Recirculation/Reuse and Iron and Steel Industry
Compendex - Internet Connection Metadex - Internet Connection	Coke and Wastewater Iron and Wastewater Steel and Wastewater Coke and Water Iron and Water Steel and Water Coke and Waste and Water Iron and Waste and Water Steel and Waste and Water

Based on the results of these keyword searches, the Agency has acquired information on new and existing wastewater treatment technology, wastewater treatment and manufacturing equipment upgrades and installations, wastewater recycle and reuse practices, and other potential and existing pollution prevention practices.

EPA has consulted the U.S. Bureau of Census publications, *Census Manufacturers - Industry Series* and *Current Industrial Reports. Census Manufacturers - Industry Series* provides aggregate data on employment and payroll, value of shipments, shipments by product class, value added by manufacture, cost of materials, materials consumed by kind, inventories, and capital expenditures. *Current Industrial Reports* provides aggregate data on raw steel production by grade and furnace type, shipments by product, receipts of steel and steel consumed in producing plants by product, non-integrated steel site shipments by product, exports and imports by product, and apparent consumption of steel by product.

The Agency has subscribed to the Paine Webber publication, *World Steel Dynamics*. This source issues various reports containing data related to the iron and steel industry. A significant portion of the data concerns the forecasting of material processing, industry-wide performance, and company-specific performance. Data include shipments by country and product, capacity by country and product, and consumption by country and product at both present and forecasted levels. In addition, data include company-level and site-level information used to rate the financial soundness of steel companies throughout the world.

EPA has consulted the American Iron and Steel Institute (AISI) publication, *The Annual Statistical Report*, which provides aggregate data for AISI member companies, which are responsible for approximately 66 percent of the U.S. raw steel production. The *Annual Statistical Report* includes income statement, balance sheet, and cash flow statement figures for member companies in total, as well as data regarding employment and wages; steel shipments by product, grade, and market; exports by product and country of destination; imports by product and country of origin; raw steel production by furnace type, grade, cast, and state; and basic materials consumption.

Although the consulted sources have provided valuable industry information, and although the Agency will combine this information with data gathered through the Collection of 1997 Iron and Steel Industry Data, none of these sources alone can provide the Agency with the complete and up-to-date, industry-wide, site-specific technical and economic data crucial to the review and revision of the Iron and Steel Manufacturing Effluent Limitations Guidelines and Standards.

3(b) PUBLIC NOTICE REQUIRED PRIOR TO ICR SUBMISSION TO OMB

(i) Publication of the Federal Register Notice

On October 20, 1997, EPA published a notice in the Federal Register, 62 FR 54453, announcing the Agency's intent to submit the 1997 Iron and Steel Industry Data Collection ICR to OMB. At that time, the Data Collection consisted of one detailed survey instrument. A copy of this notice is included in Attachment 4. The notice includes a description of the entities to be affected by the proposed survey, a brief explanation of the need for the survey, identification of the authority under which the survey will be issued, and an estimate of burden to be incurred by survey respondents. Through the notice, the Agency requested comments and suggestions regarding the survey and the reduction of data collection burden, and asked that the public submit all comments and suggestions within 60 days of the Federal Register notice publication.

(ii) Public Response to the Federal Register Notice

EPA received five sets of comments within 60 days of the Federal Register notice publication from the American Iron and Steel Institute, the Steel Tube Institute of North America, Wheatland Tube Company, AK Steel Corporation, and counsel representing the Specialty Steel Industry of North America. EPA also received one set of comments from the Steel Manufacturers Association after the close of the 60 day comment period. These written comments (including those received after the deadline) are reflected in the summaries located in Attachment 5.

(iii) EPA Action Resulting from Public Comment

Major revisions to the 1997 Iron and Steel Industry Data Collection include the creation of the Short Survey, the Cost Survey, and the production and analytical data follow-up questions to reduce the overall burden on the industry. Table 3-2 presents a summary of the significant changes made to the Data Collection since the publication of the October 20, 1997 FR notice, including changes made as a result of public comment. Attachment 5 presents Agency responses to all written comments received. This attachment also includes descriptions of the survey modifications made in response to these comments.

TABLE 3-2
SIGNIFICANT CHANGES TO THE SURVEY INSTRUMENT
BETWEEN THE FIRST AND SECOND FEDERAL REGISTER NOTICES [1]

Topic	Deleted	Explanation of Modification
INTRODUCTION		
Certification Statement for Part A		EPA now provides two certification statements. The first is for the sites completing the survey. Sites not engaged in iron or steel manufacturing, forming, or finishing, or coke manufacturing may sign a second certification statement and skip out of the survey.
SECTION 1		
POTW/PrOTW fee charge structure (Questions 1-10, 1-11)		EPA formerly requested information for surcharges incurred by indirectly discharging sites from their POTW/PrOTW. EPA now requests from Detailed Survey respondents only a total fee paid, fees based on pollutant concentrations or loadings, and fee charge information.
Noncategorical wastewaters (former Question 1-15)	✔	This question formerly consisted of a series of questions about the discharge of noncategorical wastewaters.
Types of steels produced and/or processed on site (Question 1-18)		This question formerly asked sites to identify all types of alloying elements used in the production or processing of carbon, alloy, and/or stainless steels; this part of the question has been removed.
Number of operable units on site (Question 1-19)		This question formerly requested the number of units operating during 1997. In response to concerns expressed by industry, EPA added a column requesting the number of operable units on site (idle units, but not permanently shut down).

TABLE 3-2
SIGNIFICANT CHANGES TO THE SURVEY INSTRUMENT
BETWEEN THE FIRST AND SECOND FEDERAL REGISTER NOTICES[1]

Topic	Deleted	Explanation of Modification
SECTION 2		
Questions related to the first time an operation was every performed (e.g., former Question 2A-2)	✔	Each subsection of Section 2 formerly contained a question asking what year was the manufacturing process (e.g., cokemaking) first performed by any process on the site.
End uses for intermediate and final products produced (e.g., Question 2A-3)		EPA formerly included a question in each subsection of Section 2 requesting the end uses of intermediate and final products. Several of these questions have been deleted; however, cokemaking, sintering, blast furnace ironmaking, direct-reduced ironmaking, hot forming, and cold forming subsections retain simpler versions of this question.
Battery manufacturer, number and dimensions of coke ovens, coal charging system, coke oven gas collecting mains	✔	EPA has deleted certain specific questions on coke batteries (parts of former Question 2A-8).
Production		
Annual and monthly production data, maximum tons per day, maximum tons per month		The survey formerly included a series of questions asking for five years of annual production and operating data (e.g., former Question 2A-4), maximum tons per day production (e.g., former Question 2A-5), and maximum tons per month production (e.g., former Question 2A-6) for each subsection of Section 2. This series of questions has been replaced in the Detailed Survey with one question asking for five years of monthly data for each manufacturing process (e.g., Question 2A-4), and in the Short Survey with one year of monthly data and four years of annual data for each manufacturing process (e.g., Short Survey Question 2A-10).
Operating hours		EPA no longer asks for annual and monthly operating hours (e.g., former Question 2A-4, former Question 2B-16) in the Detailed Survey or Short Survey. A follow-up question requesting this data will be sent to no more than 100 sites.
Coke plant wastewater treatment (Questions 2A-17 through 2A-33)		EPA has included a series of questions similar to the questions asked in Section 3 for the purpose of collecting information specific to the treatment of coke plant wastewaters. This will ease the burden for the remainder of the industry which would most likely skip a series of questions related to biological treatment, a method specific to the treatment of coke plant wastewaters. Stand-alone coke plants no longer need Section 3.
Typical yield (e.g., former Question 2B-7)	✔	EPA has deleted certain questions about the typical yield of a manufacturing process.

TABLE 3-2
SIGNIFICANT CHANGES TO THE SURVEY INSTRUMENT
BETWEEN THE FIRST AND SECOND FEDERAL REGISTER NOTICES[1]

Topic	Deleted	Explanation of Modification
Average percentage of raw materials charged to a process (e.g., Question 2B-9)		EPA has modified certain questions about the average percentage of raw materials charged to a process because industry has indicated that "average" or "typical" amounts do not exist. EPA has also modified this question in Sections 2F (BOF), 2G (EAF), 2H (vacuum degassing), and 2I (ladle metallurgy) by not asking for raw materials on a furnace or ladle-specific basis; instead, EPA requests whether "any of these raw materials and alloying elements are added to ANY of the furnaces (ladles)?"
Operator of agglomeration process (former Question 2C-5)	✔	EPA has deleted the question about whether an agglomeration process is operated by the site or by an on-site contractor because it is not critical to the development of this rule.
Blast furnace water systems (former Question 2D-7)	✔	EPA has deleted this 5 part question which was to be answered for each set of blast furnaces sharing a common water system. The requested production information will be determined by EPA from information requested in other parts of the survey.
Physical (height, diameter, volume, heating surface, number of stoves) and operating (full wind blowing rate, oxygen blowing rate) characteristics of blast furnaces (Question 2D-5)	✔	EPA has deleted certain specific questions on blast furnaces.
Slag pits (Question 2D-6)		EPA has modified the slag pit question to request additional information necessary for the development of the effluent limitations guidelines.
Configuration of hot and cold forming mills (Questions 2K-11, 2M-8)		EPA has modified this question with a series of check box questions regarding the configuration of the hot and cold forming mills, to ease respondent burden while retaining data necessary for the development of this rule.
Products rolled on a hot or cold forming process, or a finishing process (Questions 2K-12, 2L-7, 2M-9, 2N-7)		EPA has modified this question in the Detailed Survey from a series of check boxes to ask for the shape and dimensions of the products formed on the hot or cold forming processes. This expansion was necessary for EPA to consider wastewater generation related to surface area.
Surface Treatment Operations (former Section 2M)		The survey formerly included one subsection of Section 2 with questions for all surface treatment operations (e.g., acid pickling, acid cleaning, alkaline cleaning, descaling, electroplating, hot coating). These questions are now broken into two subsections (2L and 2N) to ease respondent burden when answering these questions.

TABLE 3-2
SIGNIFICANT CHANGES TO THE SURVEY INSTRUMENT
BETWEEN THE FIRST AND SECOND FEDERAL REGISTER NOTICES[1]

Topic	Deleted	Explanation of Modification
Operation (and associated rinse) specific questions (Questions 2L-8 and 2N-8)		EPA formerly asked survey respondents to provide information for each tank or unit on each finishing line. To ease respondent burden, EPA now requests respondents to provide one response for each operation and its associated rinse for each finishing line, where each operation and its associated rinse may consist of several tanks or units.
Biological treatment		EPA has removed biological treatment questions and references from Section 3 into the wastewater treatment questions specific to the treatment of coke plant wastewaters in Section 2A.
Capital costs		EPA no longer asks for capital costs expended on the treatment system (e.g., former Questions 3A-5, 3A-6) in the Detailed Survey or Short Survey. A follow-up survey (Capital Cost Survey) requesting this data will be sent to no more than 100 sites.
Operating and maintenance (O&M) costs		EPA has modified this question (Question 3A-6) to include rates of O&M costs.
Data collection (other than required by the site's permit)		EPA has modified the question which requests whether any paired data (former Question 3A-9) have been collected and now asks survey respondents to provide summaries of data which have been collected (Question 3A-11).
Treatment Units (former Section 3B)		EPA no longer requires survey respondents to copy Section 3B for each treatment unit in each treatment system. EPA has eased the respondent burden by incorporating these questions (e.g., batch/continuous unit, design capacity flow rate of the unit, sources of wastewater into the unit, chemical additions to the unit, discharges from the unit, pollutant parameters believed or known to be in a unit) into the system specific questions in Section 3A.
Design Parameters (Questions 3A-5, 3A-15)		EPA has added a column to Questions 3A-5 and 3A-15 for sites to provide design parameters for each unit in a treatment system.

[1] "Former questions" identified in this table refer to the questions in the survey which was referenced in the 20 October 1997 Federal Register Notice. "Questions" in this table refer to the survey questions in Attachment 1 of this ICR.

3(c) CONSULTATIONS

Prior to publishing the Federal Register notice announcing the Agency's intent to submit the Collection of 1997 Iron and Steel Industry Data ICR, EPA distributed draft copies of the survey to seven trade associations representing the iron and steel industry. These associations are the American Iron and Steel Institute; the Steel Manufacturers Association; the Specialty Steel Industry of North America; the Cold Finished Steel Bar Institute; The Wire Association International, Inc.; the Steel Tube Institute of North America; and the American Galvanizers Association, Inc. The Agency requested that each association conduct a critical review of the survey, and provide EPA with comment and an estimate of the burden to be incurred by the industry in completing the survey. EPA asked each association to submit its comments by the formal comment deadline published in the Federal Register notice.

EPA met with members of four trade associations prior to the formal comment deadline to discuss the survey and the burden associated with its administration. The Agency participated in two meetings with the American Iron and Steel Institute, and one meeting each with the Steel Manufacturers Association, the Steel Tube Institute of North America, and the Specialty Steel Institute of North America. EPA also met with one trade association, the American Coke and Coal Chemicals Institute, after the comment period closed. Each meeting provided an important opportunity for Agency attendees and trade association attendees to discuss questions, comments, and concerns regarding the iron and steel industry regulatory development process, of which the survey is a significant component. All comments and suggestions made at the meetings that are related to this data collection effort are reflected in the summaries and Agency responses presented in Attachment 5.

The Agency also made revisions to the Collection of 1997 Iron and Steel Industry Data based on information gathered during industry site visits. Certain sections of the Detailed Survey were streamlined based on input received during these visits. During one site visit, EPA met with the Steel Service Center Institute and discussed issues related to this rulemaking.

While planning and developing the data collection activities associated with the Collection of 1997 Iron and Steel Industry Data, project team members have combined innovative ideas with mechanisms that have been used in previous effluent guidelines projects. Several members of the EPA iron and steel effluent guidelines project team have extensive experience with effluent guidelines projects. Two of the current EPA project team members were involved in the development and promulgation of the CWA regulations for the iron and steel industrial category in 1982. Several of the project team members assisted in the development and recent administration of the U.S. Environmental Protection Agency 1996 Metal Products and Machinery Industry Phase II Survey. Several of the team members have assisted in the extensive data collection, maintenance, and analysis activities associated with the development of effluent guidelines for other industrial categories. Two members of the iron and steel effluent guidelines project team have over 15 years of knowledge of, and experience with, the iron and steel industry. These team members have made significant contributions to the development of the survey, and to the team's efforts to minimize the burden that the survey will place on the industry.

3(d) EFFECTS OF LESS FREQUENT COLLECTION

EPA will distribute the Collection of 1997 Iron and Steel Industry Data once for the purpose of gathering the necessary data to review and revise the current effluent limitations guidelines and standards for the iron and steel industry. The Detailed Survey and the Short Survey will be administered simultaneously, and no site will receive both versions of the survey. The Cost Survey and the production and analytical data follow-up questions will be distributed following the Detailed Survey and Short Survey to a subset of respondents. The Short Survey, Cost Survey, and two follow-up questions were developed in response to public comment to minimize burden on the industry and better identify what sites should respond.

3(e) GENERAL GUIDELINES

The Collection of 1997 Iron and Steel Industry Data will be conducted in accordance with the Paperwork Reduction Act (5 CFR 1320.5(d)(2)), and will adhere to OMB general guidelines for information collections.

3(f) CONFIDENTIALITY

In accordance with 40 CFR, Part 2, Subpart B, Section 2.203, the Collection of 1997 Iron and Steel Industry Data instruments inform respondents of their right to claim information as confidential. Each survey provides instructions for claiming confidentiality, and informs respondents of the terms and rules governing the protection of Confidential Business Information (CBI) under the Clean Water Act and 40 CFR 2.203(B). Each survey question which requests potentially confidential information is accompanied by a CBI box. Survey respondents are requested to check all CBI boxes which accompany responses they claim as confidential.

EPA and its contractors will follow EAD's existing procedures to protect data labeled as CBI. These procedures include the following:

- Ensure secure handling of completed surveys to preclude access by unauthorized personnel;
- Store completed surveys and databases in secured areas of offices, and restrict access to authorized EPA and contractor personnel only;
- Restrict any publication or dissemination of confidential study results or findings to aggregate statistics and coded listings. Individual respondents will not be identified in summary reports and EPA contractors will not release respondents' names to unauthorized individuals.

Each EPA contractor that collects, processes, or stores CBI is responsible for the proper handling of that data. Each contractor shall safeguard information as described in Section 2.211 (d) of Subpart B and is obligated to use or disclose information only as permitted by the contract under which the information is furnished.

3(g) SENSITIVE QUESTIONS

The Collection of 1997 Iron and Steel Industry Data does not include sensitive questions regarding sexual behavior or attitudes, religious beliefs, or other personal matters.

4. THE RESPONDENTS AND THE INFORMATION REQUESTED

4(a) RESPONDENTS / SIC CODES

(i) Respondents to the Collection of 1997 Iron and Steel Industry Data (Detailed Survey)

EPA will distribute the Detailed Survey to integrated mills (with and without cokemaking), non-integrated mills (with and without finishing), stand-alone cokemaking sites, stand-alone direct-reduced ironmaking or sintering sites, stand-alone finishing sites, and stand-alone hot forming sites. The Agency believes that these types of iron and steel sites generate and discharge the majority of iron and steel industry process wastewaters and pollutant loadings. The following list of Standard Industrial Classification (SIC) codes are associated with iron and steel industry sites that are affected by the data collection effort covered under this ICR:

- 3312 - Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills; and
- 3479 - Electroplating, Plating, Polishing, Anodizing, and Coloring.

(ii) Respondents to the Collection of 1997 Iron and Steel Industry Data - Short Form (Short Survey)

EPA will distribute the Short Survey to stand-alone cold forming sites, stand-alone pipe and tube sites, stand-alone hot dip coating sites, and stand-alone wire sites. The Agency believes that these types of iron and steel industry sites generate and discharge relatively lower volumes of iron and steel industry process wastewaters, as well as pollutant loadings. The Short Survey is the least burdensome mechanism through which the Agency can collect all information essential to the review of current iron and steel industry regulations. The following list of Standard Industrial Classification (SIC) codes are associated with iron and steel industry sites that are affected by the data collection effort covered under this ICR:

- 3315 - Steel Wiredrawing and Steel Nails and Spikes;
- 3316 - Cold-Rolled Steel Sheet, Strip, and Bars;
- 3317 - Steel Pipe and Tubes; and
- 3479 - Coat/Engrave/Allied Services, not elsewhere classified.

(iii) Respondents to the Collection of Iron and Steel Industry Wastewater Treatment Capital Cost Data (Cost Survey)

EPA will distribute the Cost Survey to no more than 100 iron and steel industry sites that operate wastewater treatment systems with candidate control technologies for

regulatory options. The Agency will use responses to the Detailed Survey and Short Survey to identify sites to receive the Cost Survey. The Cost Survey is the least burdensome mechanism to collect detailed capital cost information since it will be distributed to a target population.

(iv) Respondents to the Production Follow-up Question to the Collection of 1997 Iron and Steel Industry Data

EPA will distribute a production follow-up question to no more than 100 iron and steel industry sites that are candidates to evaluate the production basis for the regulation as implemented by iron and steel industry permit writers. The Agency will use responses to the Detailed Survey and Short Survey to identify these sites. The follow-up question is the least burdensome mechanism to collect detailed production data since it will be distributed to a target population.

(v) Respondents to the Analytical Data Follow-up Question to the Collection of 1997 Iron and Steel Industry Data

EPA will distribute an analytical data follow-up question to no more than 100 iron and steel industry sites that have useful data to characterize raw wastewaters and treated effluent streams in the iron and steel industry, as well as to evaluate treatment performance. The Agency will use responses to the Detailed Survey and Short Survey to identify these sites. The follow-up question is the least burdensome mechanism to collect individual monitoring data points since it will be distributed to a target population.

4(b) INFORMATION REQUESTED

(i) Detailed Description of the Collection of 1997 Iron and Steel Industry Data (Detailed Survey)

The Detailed Survey, presented in Attachment 1, consists of two parts. Part A collects general site and technical data, which will be used to determine industry production rates, water use and reuse in the processes (including factors that affect water use and reuse), wastewater generation rates (including factors that affect wastewater generation), types of pollutants and pollutant loadings (including factors that affect types of pollutants and pollutant loadings), pollution prevention and wastewater management techniques, and treatment and disposal costs and practices. Part B collects financial and economic data, which will be used to characterize the economic status of the industry and to estimate economic impacts of wastewater regulations.

EPA has designed the survey instrument to include many burden-reducing features. For example, the Detailed Survey contains many “screener” questions with simple “yes” or “no” check box answers. The purpose of these screener questions is to reduce burden on respondents by directing them to skip more detailed questions that do not pertain to the site. Skip patterns will be referenced in the detailed description of the Detailed Survey, but will not be explained further.

The Introduction to each part of the survey contains instructions for that part's completion, as well as one question and a choice of two certification statements. The question asks whether the site is engaged in iron or steel manufacturing, forming, or finishing, or coke manufacturing. If the answer is "no", the respondent does not have to complete that part of the survey, but must certify their response using certification statement #2 and indicate why the survey is not applicable (e.g., the site is a sales office). If the answer is "yes", the respondent is directed to complete that part and certify their response using certification statement #1 when that part is complete.

Throughout Part A of the Detailed Survey, the Agency requests process flow diagrams (PFDs) for different operations at the site. These questions include a checklist of required information to include on the PFD. A burden-reducing feature included by EPA allows the respondent to submit existing site diagrams, as long as the existing diagrams reflect all required information. In addition, if the respondent has already included a PFD earlier in the survey that displays all the required information for a PFD requested later in the survey, the respondent only need reference the proper PFD (i.e., the respondent is not required to submit multiple copies of the same information).

For a complete explanation of the list of features the Agency has included in the Detailed Survey to ease the burden the survey administration will place on the industry, please refer to Section 6(a).

(a) Part A: Technical Information

Part A of the Detailed Survey collects technical data, and is divided into an Introduction and four sections. Section 1 collects general site information, Section 2 collects manufacturing process information, Section 3 collects wastewater treatment and plant-wide pollution prevention information, and Section 4 collects wastewater outfall information. The Agency needs information collected in Part A in order to evaluate iron and steel industry processes and wastewaters, to analyze technically feasible control technologies, to assess technology costs, to evaluate the current subcategorization of the iron and steel industrial category, to calculate pollutant loadings and the pollutant reductions associated with the regulatory options, and to assess environmental impacts made by the iron and steel industry.

The following is a description and justification of each question in Part A of the Detailed Survey.

(i) Section 1: General Site Information

Section 1 includes questions which request general site information, including site addresses; site and company contact information; site water source information; wastewater disposal practice and permit information; manufacturing processes present; and information regarding past and future changes in manufacturing and treatment processes.

Part a of Question 1-1 asks the site to attach copies of any readily available site brochures, pamphlets, general descriptions, product lists, maps, or diagrams. EPA does not

require that these items be created if they are not readily available. EPA will use the information presented in these materials to supplement information gathered through the survey and through mechanisms other than the survey. For example, the Agency will use site layouts to identify how close process areas are to each other to identify when it may be feasible for water to be reused in another process area. The reviewer of the survey may also use these overview materials to become familiar with the site before reviewing the detailed question responses. In addition, if the respondent can include readily available PFDs in response to this question, he or she may substitute these diagrams for PFDs requested throughout the survey, provided the diagrams are properly labeled and contain all of the required information.

Part b of Question 1-1 requests information on company membership in any trade associations. Throughout the entire regulatory development process, EPA will wish to consult with representatives of the iron and steel industry. EPA has identified and contacted all of the trade associations given in the question (see Section 3(c) for more details on EPA consultations related to the ICR). For future outreach activities, the Agency wishes to identify all other associations representing the iron and steel industry.

Questions 1-2 and 1-3 request verification of the site's mailing and street addresses. EPA needs the verification in order to correct or complete erroneous or incomplete portions of iron and steel industry site addresses on the survey mailing list, and to ensure that proper addresses are used for any follow-up activities. Due to the significant effort the Agency has already made to ensure the accuracy and completeness of all information on the Collection of 1997 Iron and Steel Industry Data mailing list, the Agency expects that a minimum number of sites will have to provide mailing and address information to correct EPA's records. In addition, EPA relies on location information when surveying companies that operate numerous sites throughout the United States. The Agency needs accurate site location information in order to address possible subcategorization of the industrial category based on geographic location, and to evaluate the impact that iron and steel industry sites make on local water quality.

Question 1-4 request names, titles, telephone numbers, and facsimile numbers of primary and secondary contacts at the site regarding information supplied in Part A of the survey. With this information, EPA will be able to contact responsible individuals at the site if Part A response clarification or follow-up is required. Question 1-5 requests the same information for the primary and secondary central points of contact for the company, and Question 1-6 requests the company name and street address of the central point of contact. With this information, EPA will be able to contact responsible individuals at the company level for issues related to this rulemaking effort.

Question 1-7 requests the year during which site operations related to the iron and steel industry were initiated. EPA needs this identification in order to consider the potential impact that a site's age may have on the feasibility of, or cost associated with, each candidate control technology.

Question 1-8 asks the site to identify all sources of water (e.g., city water, well water) used as process water, noncontact water, and potable water. EPA will use this information to identify how sites use purchased water and to evaluate if site water conservation practices may

result in reduced costs. At some sites, noncontact cooling water and potable water may eventually be used as sources of water addition for manufacturing processes. The original source of water will be a factor considered when determining the amount of water that can be recycled or reused in the regulatory options.

Question 1-9 asks a series of questions related to discharges to surface water. Part a of the question asks whether the site discharges any process wastewater to a surface water. EPA needs this information in order to ensure that proper regulations are developed to cover process wastewater discharges from iron and steel sites. Part b of Question 1-9 asks whether the site has an NPDES permit or a state-issued water discharge permit for the discharge of process or nonprocess wastewaters. If the site does not hold an NPDES permit, the respondent is directed to Question 1-10.

Part c of Question 1-9 asks the site to identify all types of waters regulated by the permit. EPA needs the identity of each type of water in order to consider it for regulation. Part d of Question 1-9 requests the name and type of receiving water, the permit number(s), and the expiration date(s) of the permit(s). EPA needs the name and type of receiving water in order to perform the environmental benefits analyses. EPA will use permit information to examine the site's NPDES permit and/or state issued water discharge permit for additional technical data, and to consult with the permitting authority regarding issues associated with the iron and steel industrial category regulatory development process.

Questions 1-10 and 1-11 ask a series of questions related to discharges to publicly owned treatment works (POTWs) (Question 1-10) and privately owned treatment works (PrOTWs) (Question 1-11). Part a of these questions ask whether the site has a physical connection to a POTW/PrOTW. If the site does not have a connection, they may skip to the next question (either Question 1-11 or 1-12).

Part b of Questions 1-10 and 1-11 asks whether process wastewater is discharged to a POTW/PrOTW. EPA needs this information in order to ensure that proper regulations are developed to cover process wastewater discharges from iron and steel sites. Part c of these questions asks whether the site has a written permit or agreement with the POTW/PrOTW for the discharge of process or nonprocess wastewaters. EPA will use this information to identify sites with written permits, and to ensure that respondents at these sites have provided the permit information requested in part e. If the site does not hold a permit with the POTW/PrOTW, the respondent is directed to part e of the question.

Part d of Questions 1-10 and 1-11 asks the site to identify all types of waters regulated by the permit or agreement. EPA needs the identity of each type of water in order to consider it for regulation. Part e requests the identification of the POTW/PrOTW and a contact, the permit number for the site, the permit number for the POTW/PrOTW (only if known), and the expiration date of the site's permit. EPA needs the identification of the POTW/PrOTW in order to perform the environmental benefits analyses and in order to evaluate how iron and steel wastewater discharges are ultimately released to the environment. EPA will use permit information to examine the site's discharge permit and the treatment works' NPDES permit for additional technical data, and to consult with the permitting authority regarding issues associated

with the iron and steel industrial category regulatory development process. EPA needs the identification of a contact so the Agency may consult with the contact regarding the site's permit, or regarding discharges that the treatment works accepts from the site, but does not regulate through a written permit.

Part f of Questions 1-10 and 1-11 asks whether the POTW/PrOTW charges the site any industrial wastewater treatment fees. If yes, part g requests the amount of fees paid in 1997; otherwise, the respondent is directed to the next question (either Question 1-11 or 1-12). Part h requests whether any part of the fees are based on pollutant concentrations or loadings. If no, the respondent is directed to the next question. If yes, the respondent is asked to provide in part i the amount of the wastewater treatment fees based on pollutant concentrations or loadings, and in part j the pollutants on which the fees are based, the basis for the fees (concentrations or loadings), the pollutant levels, and how the fee is calculated. The table in part j allows the respondent to provide the information in whatever units are appropriate. EPA needs the information in these sets of questions because it is possible that revised effluent limitations might result in lower wastewater generation or the lowering of pollutant levels in the effluent such that POTW/PrOTW fees would be reduced or avoided. If so, the site would experience a cost savings on these fees. The cost saving to the site is also a revenue loss to the POTW/PrOTW. Because a loss in POTW revenue might affect local government, EPA must analyze the effects of this loss to respond to the provisions of the Unfunded Mandates Reform Act (UMRA).

Question 1-12 asks the site to specify all zero discharge or alternative disposal methods practiced at the site. EPA will use this information to identify sites currently implementing technologies that result in zero discharge and to evaluate whether these practices should be incorporated into regulatory options for this industry.

Question 1-13 asks the site to identify all practices used at the site for the disposal of noncontact cooling waters. EPA needs this information in order to identify best management practices for disposing of these waters, and to identify sites that discharge noncontact cooling water (i.e., dilution flows) to surface waters, POTWs, and PrOTWs.

Question 1-14 asks whether the site is covered under one or more existing federal categorical effluent limitations guidelines during 1997, and if so to specify which guidelines regulate the site. If the site is not covered by any guidelines, the respondent is directed to Question 1-15. The Agency will use this information to identify sites which may be regulated under different federal categorical effluent limitations guidelines. The Agency may decide to revise the current applicability statements for the iron and steel industrial category and for other industrial categories in order to place sites identified through this question under one regulation. EPA will investigate the option of placing sites under one regulation because permit writers currently incur significant burden in developing "combined waste stream formula" permits for outfalls regulated under multiple categories.

Part a of Question 1-15 asks whether the current NPDES permit for the site contains alternative effluent limitations pursuant to 40 CFR 420.03 ("The Water Bubble"). The respondent has the opportunity to skip to Question 1-18 if the facility does not hold an NPDES permit. If the site's NPDES permit does include the Water Bubble provision, the respondent

skips to Question 1-16. EPA needs this information in order to determine the number and types of sites implementing this provision.

Part b of Question 1-15 asks the site to indicate reasons why the Water Bubble provision was not used for the development of the site's discharge permit. EPA will use this information to identify sites that may choose to implement the Water Bubble provision in the future. Parts c and d of Question 1-15 ask whether the site would be interested in the Water Bubble provisions if EPA were to expand it to include cokemaking operations and cold forming operations, respectively. EPA needs these responses in order to determine if there is a need for the Agency to investigate options for expanding the Water Bubble provision to include members of the industry engaged in cokemaking or cold forming operations.

Question 1-16 asks sites with NPDES permits whether they have obtained a variance and/or modified effluent limitations for nonconventional pollutants pursuant to Section 301(g) of the Clean Water Act. If the site has not obtained such a variance, the respondent is directed to skip to Question 1-17. If the site has obtained such a variance, the respondent is asked to specify which pollutants and which outfalls receive the variance. EPA will use this information to identify iron and steel sites with modified effluent limitations for certain pollutants, and to correlate this information with the Agency's computer model assumptions regarding the site's current treatment level for the identified pollutants.

Question 1-17 asks whether the site's current NPDES permit (for the discharge of process wastewaters) contains effluent limitations based on a fundamentally different factors (FDF) variance pursuant to Section 301(n) of the Clean Water Act. If the site permit is not based on an FDF variance, the respondent is directed to Question 1-18. If the site permit is based on an FDF variance, the respondent is asked to specify which pollutants and which outfalls receive this variance. EPA needs this information in order to identify sites which may have proven, pursuant to Section 301(n), that data collection activities and analyses performed in the development of 40 CFR Part 420 did not adequately characterize site operations and practices. With the information requested in this question, EPA will ensure that it captures these sites in the data collection activities and analyses associated with the review and revision of effluent limitations guidelines and standards for the iron and steel industry. EPA also needs this information in order to correlate this information with the Agency's computer model assumptions regarding the site's current treatment level for the identified pollutants.

Question 1-18 asks what types of steels (carbon, alloy, or stainless) are produced and/or processed on site. EPA will use the information requested in this question to identify potential pollutants of concern in wastewater streams, and to combine data collected through the survey instruments with analytical data collected through mechanisms other than the survey.

Question 1-19 asks the respondent to identify the number of operable process and sub-process units on site and the number of those processes that were operated during 1997. For each field in which the respondent identifies a number of operable units, the table presents the Section 2 subsection that must be completed to correspond with the units identified. This question not only serves as an efficient means for survey respondents to determine which Section

2 subsections must be completed, but also serves as an effective checklist for EPA survey reviewers to ensure that sites have completed all applicable subsections in Section 2.

Question 1-20 requests at least one general process flow diagram (PFD) that displays the on-site production process(es) and the final product(s), as well as the input of the starting materials. The respondent is not required to develop a new diagram if an existing diagram has all required information. The respondent is asked to mark each diagram with the site ID number and a PFD number, so EPA survey reviewers may effectively locate and correlate all PFDs included in the survey response. A PFD presents a significant amount of technical data in a simple visual representation. EPA needs the PFD(s) requested in this question in order to better understand the operations performed at the site.

Question 1-21 asks whether the site has permanently shut down any processes or operations in the past five years. If yes, the respondent must provide the name of the process, the date of the shut down, a description of what has occurred, and the production capacity of the process. EPA needs this information in order to characterize the industry and identify trends that may impact the current rulemaking effort, as well as to determine if sites have shut down processes or operations for which respondents will not be completing subsections in survey Section 2.

Question 1-22 asks whether the site has any publicly announced plans to start up any new processes or operations or restart processes which were temporarily shut down in the next five years. If yes, the respondent must provide the name of the process, the anticipated date the process will start up, a description of what will occur, and the production capacity of the planned process. EPA needs this information in order to characterize the industry and identify trends that may impact the current rulemaking effort, as well as to identify sites which may initiate processes that will fall under the regulations of the iron and steel industry effluent limitations guidelines and standards. The Agency recognizes that the industry is sensitive to providing information on any future projects unless they are publicly announced. The site may also mark a response as confidential business information, if they so desire.

The last page of Section 1 provides a table in which respondents may provide comments regarding the responses given in this section.

(ii) Section 2: Manufacturing Process Information

Section 2 is organized into 15 subsections that request manufacturing process information on specific operations (e.g., cokemaking, sintering). The respondent is only required to complete the subsections which are applicable to manufacturing processes at the site. These subsections were identified through responses to Question 1-19.

Each subsection also begins with a screener check box question which asks whether the specific manufacturing operation is performed at the site. If no, the respondent is directed to the next subsection. If yes, the respondent is directed to complete that subsection. EPA expects that no site will be required to complete every subsection of Section 2. Each subsection pertains to a specific manufacturing operation and, in EPA's knowledge, no one site

performs all operations. In addition, EPA estimates that only 21 integrated sites will be required to complete 11 or 12 of these subsections. The remaining sites that receive the Detailed Survey will complete between 2 and 10 subsections.

Throughout Section 2, respondents are asked to supply information for all operable units on site during 1997, including units that may have been idle for an extended period of time due to circumstances such as market conditions, major rebuilds, or labor disputes. EPA originally planned to collect information on only those units in operation during 1997, but received comment from industry that in some cases 1997 may be atypical of site operations and EPA's data collection would be skewed.

Although each subsection of Section 2 requests information regarding a specific type of manufacturing process, the types of information requested in the subsections are similar, and respondents will observe that the same question may appear in several subsections. The following detailed description of Section 2 does not duplicate descriptions of similar questions. The first time a question is encountered, it is described and explained within the context of the subsection in which it appears. If the question is repeated in another subsection, the reader is directed to the detailed description of the initial question. Although repeated questions reference different manufacturing processes, the types of information requested in these questions, as well as the Agency's need for the information, are identical.

Section 2A: Cokemaking

Parts a and b of Question 2A-1 ask for the type of cokemaking operation and type of coke produced at the site. EPA needs this information in order to determine whether subcategorization of cokemaking operations is appropriate, and in order to determine if these characteristics affect water use and wastewater generation. Part c of this question requests the site designation for the coke plant. EPA needs this identification in order to correlate information gathered in this section with information gathered in other sections of the survey, and with information gathered through mechanisms other than the survey.

Question 2A-2 requests the total rated cokemaking capacity of the entire coke plant (with moisture but excluding coke breeze) and the typical moisture content of the coke. EPA needs capacity data in order to understand the maximum production (and associated wastes) that could be expected at the coke plant. Annual and daily production capacity is the upper bound in EPA's analysis to determine a production basis for the rule. Moisture content is necessary to understand the level of pollutants that may be charged to the blast furnace.

Question 2A-3 asks the respondent to identify the percent of total coke that was used on site, off site by this company, or sold to other companies. The intermediate product may be associated with a particular subcategory. EPA needs to address the economic achievability of options for each subcategory independently. EPA needs this information in order to understand the product flow at the site, the economic achievability of subcategories, and the site's financial relationship to other parts of the company. If all of the intermediate product is consumed or further processed on site, then the costs and revenues for the site reflects this and all other processes performed with the product. If a substantial portion of the site's production is

transferred to other sites under the same corporate ownership, such transfers may be done at cost or with an intra-company price that does not reflect market conditions. If a substantial portion is sold to other companies, the information is needed to understand the relative importance of such sales to a site's total revenues.

Question 2A-4 asks for the amount of coke (with moisture, but excluding coke breeze) produced per month for the past five calendar years (1993 through 1997). EPA needs this information in order to determine a reasonable measure of actual coke production. The Agency will consider several options for this measure. Permits are currently developed using the average production of the last year or the highest production month of the last five years as a basis. The Agency will determine the most appropriate and reasonable measure of production rate when developing production-based regulatory options.

Question 2A-5 asks for the amount of coke breeze, coke oven gas, and by-product recovered per month for 1997. EPA needs this information in order to determine a reasonable measure of actual by-product recovery. By-product recovery data will assist the Agency in determining whether a normalizing factor related to by-product recovery is appropriate for any subcategory related to cokemaking, and to determine the relationship between by-product recovery rates and wastewater pollutant loadings.

The page which contains question 2A-6 is formatted with a "stop" symbol at the top to request the number of operable coke batteries on site during 1997. The respondent must complete Question 2A-6 for each operable coke battery counted within that number.

Part a of Question 2A-6 requests the site designation for the coke battery for identification purposes. Parts b and c request the first year of battery production and the year during which the last major rebuild of the battery occurred. EPA needs responses to these questions in order to perform several analyses. The Agency will consider the potential impact that process age may have on the feasibility of, or cost associated with, candidate control technologies; the Agency will consider process age as a basis for subcategorization, subdivision or segmentation of the industrial category; and the Agency will determine if a relationship between battery age and wastewater generation exists.

Parts d and e of Question 2A-6 request the rated capacity of the battery for coke production (with moisture but excluding coke breeze) and the annual number of operating hours used to determine rated capacity. EPA needs this information in order to determine the maximum possible production for the development of production-based regulatory options. Operating hours will be used to determine production per hour, which in turn will be used to estimate the maximum daily production that could be expected. Part f requests identification of charge materials to the battery. EPA needs this information in order to characterize coke battery wastewater streams and prepare baseline pollutant loading estimates for this type of process.

Part g of Question 2A-6 asks whether the coal is preheated for this battery. Coal preheating results in the removal of free moisture in coking coals, and thereby reduces the amount of waste ammonia liquor generated per ton of coal charged. EPA needs responses to this question in order to determine if coal preheating may be a relevant factor in segmenting the

cokemaking subcategory on the basis of flow, or in order to develop flow-based regulatory options.

Part h of Question 2A-6 requests the typical coking time for this battery. Coking time is an indication of whether the site is making blast or foundry coke. In addition, the rate of ammonia liquor generated during the operation is a function of coking time. EPA needs this information in order to determine whether a relationship between coking time and pollutant loadings exist, and in order to determine if coking time may be a basis of subcategorization, subdivision, or segmentation.

The page which contains question 2A-7 is formatted with a "stop" symbol at the top to request the number of operable by-product recovery plants on site during 1997. The respondent must complete Question 2A-7 for each operable by-product recovery plant counted within that number.

Part a of Question 2A-7 requests the site designation of the by-product recovery plant for identification purposes. Part b requests the first year of by-product recovery plant operation. EPA needs this information in order to consider the potential impact that site age may have on the feasibility of, or cost associated with, candidate control technologies.

Part c of Question 2A-7 requests identification of all by-products recovered at the plant. EPA needs this information in order to identify and characterize the by-product recovery processes, and in order to characterize the waste streams generated by these processes. If the respondent identifies "elemental sulfur" or "other sulfur products" in response to part c, part d requests the coke oven gas desulfurization system manufacturer. EPA needs this information because different desulfurization systems have different water discharge rates. The Agency will use this information to determine if a relationship between desulfurization system design and wastewater generation exists.

Part e of Question 2A-7 asks the respondent to identify all by-products refining processes performed at the plant. EPA will use this information to characterize the plant, and to identify and characterize the waste stream(s) generated by the refining processes.

The first page which contains Question 2A-8 is formatted with a "stop" symbol at the top to request the number of operable wet air pollution control (WAPC) systems that were on site at the coke plant during 1997. The respondent must complete Question 2A-8 for each operable WAPC system counted within that number. If the site does not have WAPC associated with the coke plant, the respondent is directed to skip to Question 2A-9.

Part a of Question 2A-8 requests the designation of all operations associated with this WAPC system. EPA needs this information in order to identify and characterize the WAPC system and correlate information provided in this question with information received in other parts of the survey. In addition, this question asks whether information for this WAPC system is already provided elsewhere in the survey. If it is, the respondent is directed to provide the designations of all operations associated with this WAPC system, check the box in the question, and skip to Question 2A-9.

Part b of Question 2A-8 asks from what processes does the WAPC system control emissions. Part c asks the respondent to indicate the devices in the WAPC system. EPA needs this information in order to identify and characterize the WAPC system and correlate information regarding the battery or by-product recovery plant with information regarding its associated WAPC system or devices.

Part d of Question 2A-8 requests the year the WAPC system was installed. EPA needs this information in order to determine if a relationship between WAPC system age and wastewater generation exists. Part e requests the gas or air flow through this WAPC device. EPA needs this information in order to determine if a relationship exists between gas or air flow and wastewater generation rate.

Part f of Question 2A-8 asks whether the water is recirculated through the system or applied once-through. If the water is applied once-through, the respondent is directed to skip to part m of this question. Part g asks whether any treatment and/or conditioning (e.g., chemical additions) is performed in the recirculating loop. If no, the respondent is directed to skip to part k. Parts h through j of Question 2A-8 ask about treatment of the recirculated water. Part h asks whether treatment in the recirculating loop also treats wastewater from other processes. If yes, the respondent is asked to specify the processes. Part i asks what treatment units and/or processes are used and part j asks what chemical additions occur. EPA needs this information in order to characterize the recirculation loop and its associated waste stream(s), to characterize the in-process treatment system, and to understand the ways in which each site achieves its level of treatment and recycle. The Agency will also use the information requested in these questions to identify candidate technologies for regulatory options.

Parts k through n of Question 2A-8 request the design flow of water through the recirculating loop, the average recirculation rate, the average rate that makeup water is added to the system, and the source of that makeup water. EPA needs this information in order to characterize the WAPC system and the quality of water it employs, to determine the size and cost of potential water pollution control equipment needed, and to identify reused or cascaded water sources.

Parts o and p of Question 2A-8 request the average discharge rate from the WAPC device (or the blowdown rate, for recirculating systems), the discharge period, and the specific destination of the discharge (including outfall numbers, permit monitoring locations, method of evaporation, and/or contract haul locations and disposal rates). EPA needs this information in order to characterize the wastewater generation associated with the WAPC device, to determine what types of discharge and/or disposal are appropriate, and to correlate this information with information gathered through other sections of the survey and through other mechanisms.

Question 2A-9 asks whether there are any dry air pollution control (DAPC) systems associated with the coke plant or with by-product recovery operations and, if so, to indicate the processes associated with DAPC systems and the type of DAPC device associated with each process. EPA needs this information in order to identify and study air pollution control technologies that result in zero water discharge from these systems.

The first page which contains Question 2A-10 is formatted with a "stop" symbol at the top to request the number of wastewater sources (excluding WAPC systems and storm water) associated with the coke plant and/or by-products recovery operations that are present. The respondent must complete Question 2A-10 for each wastewater source counted within that number. If the site does not have other wastewater sources associated with the coke plant, the respondent is directed to skip to Question 2A-11.

Parts a and b of Question 2A-10 ask the respondent to identify the source of this process wastewater (not associated with WAPC systems or storm water) and any chemicals or pollutants believed or known present in the equipment cleaning and wash down water. EPA will use this information for identification and characterization of the water source.

Parts c and d of Question 2A-10 request the wastewater flow rate and period of discharge associated with the source, and the specific destination of the discharge (including outfall numbers, permit monitoring locations, method of evaporation, and/or contract haul locations and disposal rates). EPA needs this information in order to characterize the wastewater generation associated with this source, to determine what types of discharge and/or disposal are appropriate, and to correlate this information with information gathered through other sections of the survey and through other mechanisms. EPA will characterize all wastewater streams associated with the cokemaking process in order to perform the analyses necessary to develop regulatory options.

The page which contains Question 2A-11 is formatted with a "stop" symbol at the top to request the number of off-site sources that generate process wastewater which is sent to the respondent's site for treatment. The respondent must complete Question 2A-11 for each off-site source that generates process wastewater counted within that number. If the site does not receive process wastewater from an off-site source, the respondent is directed to skip to Question 2A-12.

Parts a and b of Question 2A-11 ask the respondent to identify this off-site source which contributes process wastewater to this site, as well as any chemicals or pollutants believed or known to be present in the source. EPA needs this information for identification and characterization of the water source.

Parts c and d of Question 2A-11 request the wastewater flow rate and period of discharge associated with the off-site source, and the specific destination of the discharge (including outfall numbers, permit monitoring locations, and/or contract haul locations). EPA meeds this information in order to characterize the wastewater generation associated with this off-site source, to determine what types of discharge and/or disposal are appropriate, and to correlate this information with information gathered through other sections of the survey and through other mechanisms. EPA will characterize all waste streams associated with the cokemaking process in order to perform the analyses necessary to develop regulatory options. Currently, sites that receive off-site sources of process wastewater related to cokemaking are not granted any allowance in their permit limitations for that source. In addition, EPA needs this information in order to identify how off-site sources should be included in the regulation.

Question 2A-12 asks the respondent to indicate whether the water sources listed are used for coke quenching (only if the source has not been previously identified in Section 2A). The respondent is also asked to provide a flow rate and period of operation. EPA needs this information in order to characterize the types of waters used for coke quenching, and to understand the effects that quench waters have on other processes and their associated wastewater streams.

Question 2A-13 asks the site to provide information on major process modifications and/or shut downs at the coke plant in the past five years. The respondent is asked to identify the shut down or modification, the date on which it occurred, and provide a brief description of what occurred. EPA needs this information in order to understand what changes have occurred in this process area and how future regulation may affect operations.

Question 2A-14 asks the site to provide information about any publicly announced plans to modify and/or shut down any processes or operations at the coke plant within the next five years. The respondent must identify the planned shut down or modification, the anticipated date the process will shut down or start up, and provide a description of what will occur. EPA needs this information in order to identify sites which may initiate processes that will fall under the regulations of the iron and steel industry effluent limitations guidelines and standards. The Agency recognizes that the industry is sensitive to providing information on any future projects unless they are publicly announced. The site may also mark a response as confidential business information, if they so desire.

Question 2A-15 asks the respondent to indicate all pollution prevention (waste reduction) or management practices implemented by the site for the coke plant or the by-products recovery plant. The question also requests a description of each applicable practice. EPA needs this information in order to identify such practices, including innovative practices, that are being performed in the industry for possible inclusion in proposed regulatory options.

Question 2A-16 requests at least one PFD that displays the cokemaking process, including by-products recovery if applicable, and the water use associated with the process. The site respondent is <u>not</u> required to develop a new diagram if an existing diagram has all required information. The site respondent is asked to mark each diagram with the site ID number and a PFD number, so EPA survey reviewers may effectively locate and correlate all PFDs included in the survey response. A PFD presents a significant amount of technical data in a simple visual representation; however, EPA has tried to minimize the respondent burden by limiting the amount of data requested on the PFD. For example, information that is requested in separate questions (e.g., flow rates) are not required to be included on the PFD. EPA needs the PFD(s) requested in this question in order to understand the cokemaking process and associated waste streams.

The next page of Section 2A contains a screener check box question which asks whether any wastewater treatment is performed at the coke plant. If no, the respondent is directed to Question 2A-35. If yes, the respondent is directed to a “stop” symbol which requests the number of operable wastewater treatment systems (broken out by in-process treatment, pretreatment, and end-of-pipe treatment systems) that were on site at the coke plant during 1997.

Questions 2A-17 through 2A-33 must be completed for each treatment system; therefore, the answer to how many systems reflects the number of times these questions must be completed.

Questions 2A-17 and 2A-18 request identification of the treatment system. Question 2A-17 asks for the site designation and Question 2A-18 asks what is the type (in-process, pretreatment, or end-of-pipe) of system. EPA needs identification in order to match information gathered in this section with information gathered in other sections of the survey, and with information EPA has gathered through other mechanisms.

Question 2A-19 asks the respondent to indicate whether the treatment system co-treats wastewaters generated by other manufacturing processes. EPA needs this information in order to determine what types of wastewaters may be effectively co-treated.

Question 2A-20 requests at least one PFD that displays the coke plant wastewater treatment system and the flow of water through this treatment system. The respondent is <u>not</u> required to develop a new diagram if an existing diagram has all required information. However, for this PFD, EPA requires the respondent to identify each treatment unit using a supplied list of treatment codes. The treatment unit codes are necessary to accurately capture treatment unit-specific data in the remaining Section 2A questions. The respondent is also asked to mark each diagram with the site ID number and a PFD number, so EPA survey reviewers may effectively locate and correlate all PFDs included in the survey response. A PFD presents a significant amount of technical data in a simple visual representation. EPA needs the PFD(s) requested in this question in order to study the interaction of all components of the wastewater treatment system.

Question 2A-21 requests identification of each source of wastewater to the treatment system, the estimated average flow rate of each source, and the receiving treatment unit code (using the treatment codes from Question 2A-20). EPA needs this information in order to study the flow of wastewaters through each unit of the treatment system to help determine the treatment basis for regulatory options, as well as to accurately cost out those options. In addition, EPA needs these data in order to adequately characterize the sources that combine to form influent streams, and to compare analytical data supplied by the site to each water source. The Agency will need to match flow rate and analytical data for each wastewater-generating process with flow rate and analytical data related to the system designed to treat the wastewater. The data requested in this question will also aid the Agency in analyzing the current subcategorization of the iron and steel industry based on wastewater-generating processes.

Question 2A-22 asks for design and operating data for each treatment unit in the system. The respondent is asked to indicate whether the treatment unit is batch or continuous, provide the design capacity flow rate of the treatment unit, list design parameters applicable to that unit (listed in Question 2A-20), and list the year the unit was installed. EPA needs this information in order to characterize the treatment unit, to determine the capacity the unit has to handle additional flows if regulatory options should require it, and to determine if treatment units are nearing the end of their service life. The age of the treatment unit(s) is also an indicator for recent projects which may be selected to receive the Cost Survey.

Question 2A-23 asks for the actual 1997 operating and maintenance (O&M) costs associated with the treatment system and the rates for certain categories. Respondents are asked to include cost data for the following O&M categories: operating and maintenance labor, maintenance (materials and vendors), sampling/monitoring , chemicals, energy, and sludge and oil disposal fees. EPA has requested O&M cost data in itemized format so that the Agency can perform a separate costs analysis for each O&M category. EPA will use the information requested in this question to perform economic analyses necessary to the development of regulatory options, including analyses of treatment technology costs and analyses of overall wastewater treatment costs. EPA will combine the costs requested in this question with other treatment system costs to determine if the system technology is "economically achievable." In addition, EPA will combine the costs requested in this question with other wastewater treatment costs in order to determine the total cost that each site currently incurs in treating wastewater and to determine the financial impacts that other treatment technologies may make on each site. EPA is requesting rates of labor, energy, and sludge and oil disposal in order to evaluate if these costs vary significantly based on geographical location. The Agency must also study non-water quality impacts, such as energy consumption, related to the proposed regulatory options.

Parts a and b of Question 2A-24 ask whether the site operates a biological treatment system to treat coke plant wastewater and whether any waters other than coke plant wastewaters are added for the optimization of biological treatment system performance. If no, the respondent is directed to Question 2A-25. Otherwise, the respondent is asked in part c to identify the sources of non-coke plant water added for the optimization of the biological treatment system, and to provide the flow rate for each applicable source. EPA needs this information in order to identify sites that do not add optimization waters and to study the effects that optimization waters have on wastewater treatment performance.

Parts d and e of Question 2A-24 ask the respondent to indicate which parameters are routinely monitored in the influent to the biological treatment system (before or after the addition of dilution water) and in the aeration basins of the system. The respondent is also asked to provide the typical range and annual average measurement of each parameter in the influent stream. In the aeration basin, EPA requests the target range of controls for optimal operation of the system. EPA needs this information in order to determine the best operated treatment systems for cokemaking operations, and to identify the proper parameters used to design and control the system.

Question 2A-25 asks whether the site has made any recent modifications and/or permanently shut down any processes at this treatment system in the past five years. If yes, the respondent must provide the name and the date of the modification or shut down, and a description of what has occurred. EPA needs this information in order to evaluate the types of processes that did not work (perhaps due to treatment effectiveness or operating costs) or that were shut down or modified, and to identify the types of modifications that increase treatment performance and/or lower costs. EPA may use responses to this questions to identify sites to receive the Cost Survey.

Question 2A-26 asks whether the site has any publicly announced plans to modify or shut down any processes at this treatment system in the next five years. If yes, the respondent

must provide the name and anticipated date of the modification or shut down, and a description of what will occur. EPA needs this information in order to identify sites which may initiate or shut down treatment processes that will be included in regulatory options for the iron and steel industry in order to properly estimate industry costs to implement proposed regulatory options. In addition, the Agency will learn what types of processes are performing well or not well, and what respondents have identified as areas needing improvement.

Question 2A-27 asks the respondent to identify each chemical or nutrient added to the treatment system, including the name and purpose of the chemical or nutrient, the rate at which it is consumed, and the treatment unit(s) to which it is added. EPA needs this information in order to further study and characterize the treatment unit, and to determine the economic impacts associated with chemical or nutrient additions to the system.

Question 2A-28 asks for identification of each discharge from the treatment unit, including discharges of wastewater, oil waste, and solid waste. The respondent is asked to provide the treatment unit code from which the waste is discharged, the flow or discharge rate, and the destination of each discharge. EPA needs this information in order to study and characterize the discharge of wastes from the treatment system, and to appropriately estimate waste disposal costs due to proposed regulatory options. The Agency must also study non-water quality impacts, such as waste oil and sludge generation, associated with treatment and proposed regulatory options.

The page which contains Question 2A-29 is formatted with a “stop” symbol at the top to request whether the site has collected any data for any parameter simultaneously at both influent and effluent streams from this system during the last three years, and to direct the respondent to complete Question 2A-29 for each separate sample location. The page which contains Question 2A-30 is formatted with a “stop” symbol at the top to request the number of separate non-permitted monitoring locations in this treatment system at which the site has collected wastewater characterization analytical data during the last three years, and to direct the respondent to complete Question 2A-30 for each separate monitoring location.

For both Questions 2A-29 and 2A-30, the respondent is asked to assign a unique sampling point (SP) number to each location , to identify to location on the appropriate PFD with this SP number, and to provide the range of dates in which data were collected. In addition, the respondent is asked to provide the (1) treatment unit codes from where the wastewater stream is an effluent and to where the stream is an influent, or (2) the outfall to where the wastewater stream is discharged. The respondent is also asked to provide the pollutant parameter analyzed (using codes provided), the EPA analytical method used to analyze the samples, whether the samples were grab or composite, the total number of samples collected, the number of samples below the detection limit, the typical detection limit or range for the pollutant parameter, the average concentration and calculation methodology, the maximum and minimum concentration, and the average flow rate during sample collection. Guidance on the calculation of average concentration are provided in the directions.

EPA will use responses to this question to complete preliminary analyses on treatment effectiveness for pollutant parameters of concern in the iron and steel industry, and to

identify sites at which data relevant to the rulemaking effort have been collected. The respondent is also asked to display the location of each SP on all PFD(s) included with this section. EPA will combine the wastewater sampling data requested in this question with data collected through other mechanisms to characterize iron and steel industry wastewaters, and to estimate industry pollutant loadings. Also, EPA will use the requested data to identify recipients for the Analytical Data Follow-up Question and to study the systems that iron and steel sites are using to meet the requirements of the current rule. As part of the rulemaking effort, EPA may sample water to characterize treatment system technologies at some iron and steel industry sites.

Part a of question 2A-31 asks the respondent to identify all metal, organic, dioxin/furan, and PCB pollutant parameters which are believed or known to be present in the treatment system. Part b of question 2A-31 asks the respondent to identify all metal, organic, dioxin/furan, PCB, and conventional pollutant parameters that the system is designed to treat. EPA needs the information requested in both parts of this question in order to study the treatment of wastewater in each treatment system and to identify pollutants of concern in the iron and steel industry. EPA will correlate and study data characterizing the waters entering the system with data characterizing the pollutant parameters treated in each system, and with data characterizing the waters discharged from the system.

Question 2A-32 asks whether there are any available parcels of land on site appropriate for the construction of additional wastewater treatment facilities. If so, the respondent is asked, for up to five parcels of land, to provide a general description of the location and size of the parcel, and the distance of the parcel from this treatment system. EPA needs this information in order to properly cost proposed regulatory options.

Question 2A-33 asks for design and operating data for each operable treatment unit located at this treatment system that was not part of the system as it was configured to operate in 1997. For these treatment units, the respondent is asked to provide information identical to Question 2A-22 (for units operating in 1997) for the same reasons. EPA needs information on these units not part of the treatment system in 1997 in order to determine if the site has available units that could be used to comply with proposed regulatory options without incurring additional capital costs.

Question 2A-34 asks whether on-site incineration is performed for any wastewater generated in the cokemaking and by-products recovery processes. If no, the respondent is directed to Question 2A-35. Otherwise, the respondent must provide a description of the types of wastewater incinerated, the average flow incinerated per day, and the number of days per year wastewater is incinerated. EPA needs this information in order to study the ways in which sites are handling, treating, and disposing of process wastewaters, and to properly estimate non-water quality impacts that are associated with the proposed regulatory options.

Question 2A-35 asks whether the site has any operational practices designed to minimize the quantity of cyanides in the coke oven gas. If no, the respondent is directed to Question 2A-36. Otherwise, the respondent must briefly describe the cyanide minimization operational practice. Question 2A-36 asks whether the site has any operational practices designed to minimize the quantity of cyanides in any process wastewater stream. If no, the respondent is

directed to Section 2B. Otherwise, the respondent must briefly describe the cyanide minimization operational practice. EPA will use the information requested in these questions to identify and study operational practices that minimize the generation of this pollutant of concern, and that minimize the presence of this pollutant of concern in wastewater streams.

The last page of Section 2A provides a table in which respondents may provide comments regarding the responses given in this subsection.

Section 2B: Sintering

Question 2B-1 requests the site designation for the sinter plant. EPA needs this identification in order to correlate information gathered in the survey, and to combine it with information gathered through mechanisms other than the survey.

Question 2B-2 requests the total rated capacity of the sinter plant and the number of operating hours used to determine this rated capacity. EPA needs capacity data in order to understand the maximum production (and associated wastes) that could be expected at the sinter plant. Operating hours will be used to determine production per hour, which in turn will be used to estimate the maximum daily production that could be expected. Annual and daily production capacity is the upper bound in EPA's analysis to determine a production basis for the rule.

Question 2B-3 asks for the first year of operation at the sinter plant. EPA needs this information in order to perform several analyses. The Agency will consider the potential impact that process age may have on the feasibility of, or cost associated with, candidate control technologies; the Agency will consider process age as a basis for subcategorization, subdivision or segmentation of the industrial category; and the Agency will determine if a relationship between sinter plant age and wastewater generation exists.

Question 2B-4 requests the number of sinter strands in the sinter plant and the number of operable sinter strands that were on site during 1997. EPA needs this information in order to determine the size and maximum capacity of the sinter plant and in order to develop production-based regulatory options.

Question 2B-5 asks the respondent to provide the designation of each operable strand, as well as the line speed, length, width, and bed depth of each. EPA needs the identity of each strand to correlate information gathered in this section with information gathered in other sections of the survey, and with information gathered through other mechanisms. The Agency needs the dimensions of each strand to determine the strand capacity. In addition, the line speed and the strand dimensions are related to the sinter time and the air flow to the wind box. Since wind boxes are often equipped with wet scrubbers, the line speed and dimensions may be related to wastewater generation and pollutant loadings.

Question 2B-6 requests the typical percent moisture by weight of the sinter mix as it is applied to the sinter strand. Question 2B-7 requests the average amount of water that is added to the sinter mix to attain the desired moisture content. Question 2B-8 asks the respondent to identify all sources of water used to condition the sinter mix. EPA needs the information

requested in this series of questions in order to identify sites that use water to condition sinter mix, and to study this practice. In addition, the Agency will study information provided by sites that dispose of wastewater through this practice, and will determine if this disposal alternative may be developed into a low cost candidate technology for regulatory options. During this analysis, EPA will evaluate whether this disposal practice introduces pollutants into the wind box scrubber water or into the blast furnace scrubber water (through the charge of sinter into the blast furnace).

Question 2B-9 asks the respondent to identify all raw materials that are charged to the sintering process. EPA needs this information in order to identify sources of potential pollutants of concern in waste streams associated with the sinter process, as well as pollutants that may be introduced to the blast furnace in the sinter and show up in blast furnace scrubber water.

For a discussion of Questions 2B-10 and 2B-11, please refer to Questions 2A-3 and 2A-4. For a discussion of Questions 2B-12 and 2B-13, please refer to Question 2A-8 and 2A-9.

The page which contains Question 2B-14 is formatted with a "stop" symbol at the top to request the number of wastewater sources (excluding WAPC systems and storm water) from sinter plant operations that are present. The respondent must complete Question 2B-14 for each wastewater source counted within that number. If the site does not have other wastewater sources associated with the sinter plant, the respondent is directed to skip to Question 2B-15. For a discussion of Question 2B-14, please refer to Question 2A-10. For a discussion of Questions 2B-15 through 2B-18, please refer to Questions 2A-13 through 2A-16.

The last page of Section 2B provides a table in which respondents may provide comments regarding the responses given in this section.

Section 2C: Briquetting (and Other Agglomeration Processes)

The first page of Section 2C is formatted with a "stop" symbol at the top to request the number of operable briquetting operations (and other agglomeration processes, not including sintering) that were on site during 1997. The respondent must complete Section 2C for each operable briquetting operation counted within that number. For a description of Question 2C-1, please refer to Question 2B-1.

Question 2C-2 asks the respondent to specify the type of agglomeration process that occurs in the plant. EPA needs this response in order to understand the information gathered through Section 2C, and to correlate this information with additional information gathered through the survey and through mechanisms other than the survey. EPA will also determine whether type of agglomeration process is an appropriate basis for subcategorization, subdivision, or segmentation of the industry.

For a description of Questions 2C-3 and 2C-4, please refer to Questions 2B-3 and 2B-2, respectively.

Question 2C-5 asks whether heating is part of the agglomeration process and, if so, what method is used to heat materials. EPA needs this information because heating may cause volatilization of some materials, which will affect air emission discharges and pollutant loadings in the scrubber water from the agglomeration process. In addition, the volatilization of these materials during agglomeration will eliminate their presence in the blast furnace operation.

For a description of Questions 2C-6 and 2C-7, please refer to Questions 2B-6 through 2B-8.

Question 2C-8 asks whether natural or synthetic binding materials are used in the agglomeration process and, if so, to provide a list of the principal ingredients (1% or more by weight) of each binding material. The question also requests a copy of the material safety data sheet (MSDS) for each binding material. Until recently, briquetting was an uncommon practice in the iron and steel industry. EPA needs this information to identify potential pollutants of concern in waste streams. The MSDS is helpful, but often does not list all known pollutants and therefore needs to be supplemented with the information requested in Question 2C-8.

For a description of Question 2C-9, please refer to Question 2B-9. For a discussion of Question 2C-10, please refer to Question 2A-4. For a discussion of Question 2C-11 and 2C-12, please refer to Question 2A-8 and 2A-9.

The page which contains Question 2C-13 is formatted with a "stop" symbol at the top to request the number of wastewater sources (excluding WAPC systems and storm water) from agglomeration processes that are present. The respondent must complete Question 2C-13 for each wastewater source counted within that number. If the site does not have other wastewater sources associated with the agglomeration process, the respondent is directed to skip to Question 2C-14. For a discussion of Question 2C-13, please refer to Question 2A-10. For a discussion of Questions 2C-14 through 2C-17, please refer to Questions 2A-13 through 2A-16.

The last page of Section 2C provides a table in which respondents may provide comments regarding the responses given in this section.

Section 2D: Blast Furnace Ironmaking

Questions 2D-1 and 2D-2 request the number of operable blast furnaces on site during 1997 and their site designations. EPA needs this information in order to correlate information gathered in Section 2D with additional information gathered in the survey, and to combine it with information gathered through mechanisms other than the survey.

For a discussion of Question 2D-3, please refer to Question 2A-3.

Question 2D-4 asks the respondent to provide the names of blast furnaces that use shared water systems for the recycle of process wastewater. EPA will need to identify the furnaces associated with each water system in order to characterize the water use, reuse, and recycle associated with the blast furnace operation for the development of regulatory options.

The page which contains Question 2D-5 is formatted with a "stop" symbol at the top to request the number of operable blast furnaces on site during 1997. The respondent must complete Question 2D-5 for each operable blast furnace counted within that number. Please refer to Question 2A-6.a., 2A-6.b., 2A-6.d., and 2A-6.e. for a discussion of Question 2D-5.a., 2D-5.b., 2D-5.c., and 2D-5.d.

Part e of Question 2D-5 requests the date on which the last major blast furnace reline occurred, and the date on which the next blast furnace reline is anticipated to occur. The Agency assumes in its analysis that blast furnace slag pit relines only occur when a blast furnace is taken out of service for relining (since the cost to take a furnace out of service simply for slag pit relining would be prohibitive). Slag pit relining is a best management practice that may be included in proposed regulatory options. EPA needs to know the time interval between furnace relines to properly include BMPs in the regulatory options.

Part f of Question 2D-5 requests the typical operating characteristics and yield of the blast furnace. EPA needs this information because the operating pressure and temperatures of the furnace affect the rate of generation of cyanide and ammonia emissions and, subsequently, the quality of gas cooling and cleaning water discharges. EPA may need to transfer wastewater characterization data collected through EPA sampling episodes, or other mechanisms, to certain sites based on these data.

Part g of Question 2D-5 asks the respondent to identify all sources of water used to add moisture to the burden or to the furnace, with the percentage of water provided by each source. EPA needs this information in order to identify which sites use water to add moisture to the burden or to the furnace, and to study what types or sources of water are used for this purpose. The Agency will consider this use of water and any impacts related to this practice when evaluating disposal alternatives for use in proposed regulatory options.

Parts h and i of Question 2D-5 asks the respondent to identify all raw materials that do or do not contain iron and that are charged to the blast furnace. The question also requests the typical weight of raw material that is charged per net ton of hot metal manufactured. EPA needs this information in order to characterize blast furnace wastewater streams and to prepare baseline pollutant loading estimates for this type of process.

For a discussion of Question 2D-5.j., please refer to Question 2A-4.

The first page of Question 2D-6 is formatted with a "stop" symbol at the top to request the number of blast furnace slag pits on site during 1997. The respondent must complete Question 2D-6 for each blast furnace slag pit counted within that number.

Question 2D-6 (parts a through c) requests descriptive information on each slag pit associated with a specific blast furnace. The respondent is asked to provide each pit's site designation, location to the furnace, and dimensions. This information is needed because EPA may consider including the relining of slag pits as a cost associated with proposed regulatory options. Specific information on the dimensions of each pit and the location to the furnace are needed to complete that cost analysis.

The rest of Question 2D-6 requests information on the quantity and type of slag processed in each pit, whether water is used for slag cooling or quenching, and, if so, the type of water flow, source of water, and flow rate. This information is needed in order to characterize wastewater streams that are associated with slag cooling and quenching operations.

For a discussion of Question 2D-7 (parts a through p), please refer to Question 2A-8. Parts q, r, and s of Question 2D-7 request information on gas seals and gas seal water. This information is needed in order to determine if gas seals generate process wastewater that must be included in the costs associated with proposed regulatory options.

For a discussion of Question 2D-8, please refer to Question 2A-9.

The page which contains Question 2D-9 is formatted with a "stop" symbol at the top to request the number of wastewater sources (excluding gas cooling and cleaning systems and storm water) from blast furnace operations that are present. The respondent must complete Question 2D-9 for each wastewater source counted within that number. If the site does not have other wastewater sources associated with the blast furnace, the respondent is directed to skip to Question 2D-10. For a discussion of Question 2D-9, please refer to Question 2A-10. For a discussion of Questions 2D-10 through 2D-12, please refer to Questions 2A-13 through 2A-15.

Question 2D-13 requests information from the past five years on the types and purpose of materials injected or charged to the blast furnace. EPA needs this information in order to identify sites that incinerate these materials in blast furnaces. The presence of these materials may affect the pollutant characteristics of air emissions and, subsequently, the pollutant loadings related to scrubber water discharges. EPA may need to transfer characterization data to certain sites based on these data.

For a discussion of Question 2D-14, please refer to Question 2A-16. The last page of Section 2D provides a table in which respondents may provide comments regarding the responses given in this section.

Section 2E: Direct-Reduced Ironmaking

For a discussion of Questions 2E-1 and 2E-2, please refer to Questions 2B-1 and 2B-2. For a discussion of Question 2E-3, please refer to Question 2B-9.

For a discussion of Questions 2E-4 and 2E-5, please refer to Questions 2A-3 and 2A-4. For a discussion of Questions 2E-6 and 2E-7, please refer to Questions 2A-8 and 2A-9.

The first page of Question 2E-8 is formatted with a "stop" symbol at the top to request the number of wastewater sources (excluding WAPC systems and storm water) associated with DRI plant operations that are present. The respondent must complete Question 2E-8 for each wastewater source counted within that number. If the site does not have other wastewater sources associated with the DRI plant, the respondent is directed to skip to Question 2E-9. For a discussion of Question 2E-8, please refer to Question 2A-10. For a discussion of Questions 2E-9 through 2E-12, please refer to Questions 2A-13 through 2A-16.

The last page of Section 2E provides a table in which respondents may provide comments regarding the responses given in this section.

Section 2F: Basic Oxygen Furnace (BOF) Steelmaking

For a discussion of Questions 2F-1 and 2F-2, please refer to Questions 2D-1 and 2D-2. For a discussion of Questions 2F-3 through 2F-5, please refer to Questions 2B-1 through 2B-3. For a discussion of Question 2F-6, please refer to Question 2A-4.

Questions 2F-7 and 2F-8 request the number of ladle metallurgy stations and vacuum degassing stations associated with the BOF shop. EPA needs this information in order to understand the configuration of sites with multiple BOF shops, which in turn can affect EPA's ability to consider water reuse in another process or commingling of water prior to treatment. EPA also needs this information in order to correlate information gathered in Section 2F with additional information gathered in the survey, particularly Section 2H: Vacuum Degassing and Section 2I: Ladle Metallurgy (and Other Refining Processes).

For a discussion of Question 2F-9, please refer to Question 2B-9.

The page which contains Question 2F-10 is formatted with a "stop" symbol at the top to request the number of operable BOFs on site during 1997. The respondent must complete Question 2F-10 for each operable BOF counted within that number. Question 2F-10 requests identification of each operable BOF, as well as the heat size, typical tap-to-tap time, how oxygen is applied, the type of gas cleaning system, and whether scrap is preheated prior to being charged to the BOF. EPA will use information regarding heat size to determine the proper production basis for wastewater generated from the furnace. Tap-to-tap time is another measure of productivity and indicates how much of the process capacity the site is utilizing. The type of oxygen application and the type of gas cleaning system is used to evaluate whether a relationship exists between these characteristics and the type and volume of water use and wastewater generation at the BOF. The preheating of scrap reduces time in furnace, but has been shown to encourage the formation of dioxin/furan and other incidental generation of pollutants.

For a discussion of Question 2F-11, please refer to Question 2A-8. For a discussion of Question 2F-12, parts a through c and h through r, please refer to Question 2A-8.

Parts d through g of Question 2F-12 ask for detail on the water applied to the gas stream for conditioning, including the volume of water, the purpose of applying the water, whether an excess of water is applied, and whether the system is operated in a zero-discharge mode. These questions provide information on the operation of semi-wet air pollution control (SWAPC) systems and whether wastewater discharges normally occur. This information is needed for EPA to properly estimate costs and pollutant loadings associated with proposed regulatory options.

For a discussion of Question 2F-13, please refer to Question 2A-9.

Question 2F-14 asks a series of questions about water used for slag quenching or cooling, including whether slag from this BOF shop is quenched or cooled, if so, the location of the slag quenching operations, the average monthly volume of water used, the average monthly amount of slag produced, and the source of water used for quenching. This information is needed in order to determine the wastewater volumes and pollutant loadings associated with slag quenching operations at the BOF shop in order to properly estimate costs associated with proposed regulatory options.

The first page which contains Question 2F-15 is formatted with a "stop" symbol at the top to request the number of wastewater sources (excluding air pollution control systems, vacuum degassers, casters, and storm water) associated with BOF steelmaking operations that are present. The respondent must complete Question 2F-15 for each wastewater sources counted within that number. If the site does not have other wastewater sources associated with the BOF steelmaking operations, the respondent is directed to skip to Question 2F-16.

For a discussion of Questions 2F-15 through 2F-19, please refer to Questions 2A-10 and 2A-13 through 2A-16. The last page of Section 2F provides a table in which respondents may provide comments regarding the responses given in this section.

Section 2G: Electric Arc Furnace Steelmaking

For a discussion of all questions in Section 2G, please refer to Section 2F: Basic Oxygen Furnace Steelmaking.

Section 2H: Vacuum Degassing

Question 2H-1 is formatted with a "stop" symbol at the top to request the number of operable vacuum degassing processes that were on site in 1997. The respondent must complete Question 2H-1 for each operable vacuum degassing process counted within that number.

For a discussion of Question 2H-1.a., please refer to Question 2A-1. For a discussion of Question 2H-1.b. through 2H-1.f., please refer to Questions 2B-1 through 2B-3.

Part g of question 2H-1 asks the respondent to identify the function(s) of the vacuum degassing process. EPA needs this information in order to determine whether the functions of the vacuum degassing station are related to the generation of wastewater and to determine whether this is a basis for subcategorization, subdivision, or segmentation of the industry.

For a discussion of part h of Question 2H-1, please refer to Question 2A-4. For a discussion of Question 2H-2, please refer to Question 2B-9.

The first page which contains Question 2H-3 is formatted with a "stop" symbol at the top to request the number of operable WAPC systems or operable vacuum systems (which can be made up of a set of barometric condensers or steam ejectors) that were on site at a vacuum degassing process during 1997. The respondent must complete Question 2H-3 for each operable

WAPC system or operable vacuum system counted within that number. If the site does not have any of these devices, the respondent is directed to skip to Question 2H-4. For a discussion of Questions 2H-3 and 2H-4, please refer to Questions 2A-8 and 2A-9.

The first page which contains Question 2H-5 is formatted with a "stop" symbol at the top to request the number of wastewater sources (excluding WAPC systems, vacuum systems, and storm water) associated with vacuum degassing processes that are present. The respondent must complete Question 2H-5 for each wastewater source counted within that number. If the site does not have other wastewater sources associated with vacuum degassing, the respondent is directed to skip to Question 2H-6. For a discussion of Question 2H-5, please refer to Question 2A-10.

For a discussion of Questions 2H-6 through 2H-9, please refer to Questions 2A-13 through 2A-16. The last page of Section 2H provides a table in which respondents may provide comments regarding the responses given in this section.

Section 2I: Ladle Metallurgy (and Other Refining Processes)

For a discussion of the questions in Section 2I, please refer to Section 2H: Vacuum Degassing.

Section 2J: Casting

Question 2J-1 asks for identification of the type of casting operations performed on site. Part a asks whether any type of casting other than continuous casting is performed; if so, part b requests a list of the casting processes (other than continuous casting) that were on site in 1997, along with their 1997 annual production rates. EPA needs this information in order to identify the non-continuous casting operations on site and develop appropriate measures on which to develop production-based regulatory options. However, for this type of process, EPA reduced the burden of the survey by not requiring each respondent to provide monthly production rates. EPA expects that these non-continuous casting processes are almost always dry operations. Annual production rates will be sufficient to analyze minor sources of wastewater, if any. EPA may choose to select certain sites to receive the production follow-up question, if additional analysis of non-continuous casting production is necessary.

Part c asks whether continuous casting is performed at the site; if not, the respondent is directed to skip to Question 2J-3.

The first page which contains Question 2J-2 is formatted with a "stop" symbol at the top to request the number of operable continuous casters on site during 1997. The respondent must complete Question 2J-2 for each operable continuous caster counted within that number.

For a discussion of Question 2J-2 (parts a, b, d, and e), please refer to Questions 2B-1 through 2B-3. Part c of Question 2J-2 requests the number of strands on the continuous caster. EPA needs this information in order to evaluate the relationship between water usage, wastewater generation, and pollutant loadings to the number of strands per caster.

For a discussion of Question 2J-2.f., please refer to Question 2A-4.

Part g of Question 2J-2 asks the respondent to indicate the type of product cast by the continuous caster. The question also requests the range of dimensions of each type of product the caster is capable of casting. EPA needs this information in order to evaluate possible subcategorization of the industry. Because of the variance in product dimensions, different products may generate significantly different volumes of wastewater on a weight basis (i.e., gallons wastewater per ton of product cast).

For a discussion of Question 2J-2, parts h through r, please refer to Question 2A-8, parts f through p. For a discussion of Questions 2J-3 and 2J-4, please refer to Questions 2A-8 and 2A-9.

The first page which contains Question 2J-5 is formatted with a "stop" symbol at the top to request the number of wastewater sources (excluding WAPC systems, contact spray water systems, and storm water) associated with casting operations that are present. The respondent must complete Question 2J-5 for each wastewater source counted within that number. If the site does not have other wastewater sources associated with casting operations, the respondent is directed to skip to Question 2J-6. For a discussion of Question 2J-5, please refer to Question 2A-10.

For a discussion of Questions 2J-6 through 2J-9, please refer to Questions 2A-13 through 2A-16.

The last page of Section 2J provides a table in which respondents may provide comments regarding the responses given in this section.

Section 2K: Hot Forming

For a discussion of Questions 2K-1 through 2K-3, please refer to Questions 2B-1 through 2B-3.

Question 2K-4 asks a series of questions on the configuration and operating practices of the hot forming process, including the maximum capacity of the reheat furnace when cold charging and hot (or warm) charging steel, the percent of production that was hot (or warm) charged, whether the process is configured for direct-rolling, and the percent of production that was produced via direct-rolling. EPA needs capacity data in order to understand the maximum production (and associated wastes) that could be expected at the hot forming process. Capacity data for hot forming is made up of two parts: the capacity of the forming process and the capacity of the reheat furnace. Annual and daily production capacity is the upper bound in EPA's analysis to determine a production basis for the rule.

For a discussion of Question 2K-5, please refer to Question 2A-4.

Question 2K-6 asks what type of hot forming is performed at this process. EPA needs this information in order to determine whether subcategorization, subdivision, or

segmentation of hot forming processes is appropriate, and to determine if these characteristics affect water use and wastewater generation.

Question 2K-7 asks whether scarfing is performed in conjunction with this hot forming process; if so, the respondent is asked to specify the type of scarfing that is performed and what type of scarfing emission controls exist. This information is needed in order to determine whether scarfing operations affect wastewater volumes and pollutant loadings associated with hot forming processes in order to properly estimate costs associated with proposed regulatory options.

Question 2K-8 asks what types of steels (carbon, alloy, or stainless) were rolled at the hot forming mill in 1997. The question also requests the percentage of each type of steel that was rolled. EPA needs this information in order to identify potential pollutants of concern in wastewater streams, and to combine data collected through the survey instruments with analytical data collected through mechanisms other than the survey.

For a discussion of Question 2K-9, please refer to Question 2A-3. Question 2K-10 requests identification of why water or solutions are applied to the hot forming process. EPA needs this information in order to understand the way in which water is used and wastewater generated at the hot forming process in order to properly estimate costs associated with proposed regulatory options.

Question 2K-11 asks the respondent to supply additional information on the configuration of the hot forming process. For each stand, the question requests the stand designation, whether the stand is single pass or reversing, whether direct contact water is applied once-through or recirculating, whether forming/rolling solutions are applied once through or recirculating, whether wet emission controls are present, whether flume flushing for scale removal is present, and the designation of the appropriate scale pit. EPA needs this information in order to evaluate the way water is used and wastewater is generated at the hot forming process, and what pollutants may be present due to the addition of forming/rolling solutions. In addition, it is important to understand how wastewater is currently collected and treated (in scale pits) in order to properly estimate costs associated with proposed regulatory options.

Question 2K-12 asks a series of questions on the types of products formed at this hot forming process. Part a asks the respondent to identify all products rolled from the hot forming mill, and to provide the product shape and range of dimensions. Parts b through d ask the respondent to provide the shape and dimensions of the hot formed product with the highest production, specify the 1997 annual production of that product, and provide the percent of overall production in 1997 that this product represented. EPA needs this information in order to evaluate possible subcategorization, subdivision, or segmentation of the industry. Because of the variance in product dimensions, different products may generate significantly different volumes of wastewater on a weight basis (i.e., gallons wastewater per ton of product cast). The Agency must base a production-normalizing factor on the most appropriate and reasonable measure when developing production-based regulatory options. EPA will consider several options for a measure of hot forming production, including the surface area of the products formed in the hot forming process. In addition, EPA will consider as a possible subcategorization, subdivision, or

segmentation factor the configuration of the hot forming process and whether products of one size versus products of many sizes and dimensions are formed.

The first page which contains Question 2K-13 is formatted with a "stop" symbol at the top to request the number of separate operable direct contact water systems or rolling solution systems on site at this hot forming process during 1997. The respondent must complete Question 2K-13 for each separate operable direct contact water system or rolling solution system counted within that number. If the site does not have any direct contact water systems or rolling solution systems associated with the hot forming process, the respondent is directed to skip to Question 2K-14.

Part a of Question 2K-13 asks for the function of the direct contact water system. EPA needs this information in order to determine whether the function affects water use and wastewater characteristics, and whether this function may be a basis for subcategorization, subdivision, or segmentation. Part b of Question 2K-13 asks for the year the system was installed. The Agency will consider the potential impact that age may have on the feasibility of, or cost associated with, candidate control technologies, as well as subcategorization, subdivision, or segmentation of the industrial category. EPA will also determine if a relationship between age of the water system and wastewater characteristics exists.

For a discussion of Question 2K-13, parts c through m, please refer to Question 2A-10, parts f through p. For a discussion of Questions 2K-14 and 2K-15, please refer to Questions 2A-8 and 2A-9.

The first page which contains Question 2K-16 is formatted with a "stop" symbol at the top to request the number of wastewater sources (excluding direct contact water systems, WAPC systems, and storm water) associated with the hot forming process that are present. The respondent must complete Question 2K-16 for each wastewater source counted within that number. If the site does not have other wastewater sources associated with the hot forming process, the respondent is directed to skip to Question 2K-17. For a discussion of Question 2K-16, please refer to Question 2A-10.

For a discussion of Questions 2K-17 through 2K-20, please refer to Questions 2A-13 through 2A-16. The last page of Section 2K provides a table in which respondents may provide comments regarding the responses given in this section.

Section 2L: Acid Pickling and Descaling (Including Acid Regeneration)

The first page of Section 2L is formatted with a "stop" symbol at the top to request the number of operable acid pickling and/or descaling lines or areas (as defined by site personnel) that were on site during 1997. The respondent must complete Section 2L for each operable acid pickling and/or descaling line or area counted within that number. If the site does not perform acid pickling or descaling operations, but does perform acid regeneration, the respondent is directed to skip to Question 2L-9. Section 2L is very similar to Section 2N: Surface Cleaning and Coating. The instructions indicate that the respondent should report a

process line/area in one or the other of these sections, depending on what operations occur on the line.

For a discussion of Questions 2L-1 through 2L-4, please refer to Questions 2B-1 through 2B-3 and 2A-16.

Question 2L-5 requests the operations performed at this process line/area to evaluate wastewater generation by the type of operation conducted. For a discussion of Question 2L-6, please refer to Question 2A-4. For a discussion of 2L-7, please refer to Question 2K-12.

The first page which contains Question 2L-8 is formatted with a "stop" symbol at the top to request the number of operations including associated rinses in the process line/area. The respondent must complete Question 2L-8 for each operation counted within that number. Questions 2L-8 does <u>not</u> need to be completed for each tank in the line, only each type of operation, which can include several solution and rinse tanks.

Part a of Question 2L-8 requests a site designation for the operation/rinse for identification purposes. Parts b through d request the type of operation performed, along with the type of the operation that occurred previously and the type of operation that occurs next on the line. This information will help EPA to understand the configuration of operations on the line and how they might relate to wastewater generation and pollutant loadings.

Part e requests the chemicals added to the solution and the solution strength (percent by volume) to estimate pollutant loadings of wastewaters generated from these options. This information is useful in order to develop appropriate estimates of costs associated with proposed regulatory options.

Parts f and g request the heating method for the solution/rinse and the temperature to which each is heated. Part h requests the method for agitating or stirring the solution/rinse. This information will help EPA to evaluate whether heating and stirring operations affect the rate of wastewater generation and wastewater pollutant loadings. For example, direct steam injection can increase wastewater generation rates. Air sparging and heating can increase evaporation rates and allow for greater reuse of rinse water. In addition, heating operations may impact air emissions from these operations; therefore, EPA needs this information in order to evaluate possible non-water quality environmental impacts associated with the various regulatory options EPA considers.

Part i asks whether a fume scrubber or WAPC system is associated with the solution/rinse to correlate information supplied in Question 2L-10 with specific operations.

For a discussion of Question 2L-8.j. through 2L-8.l. and Question 2L-8.m. through 2L-8.o., please refer to Question 2A-8.n. through 2A-8.p.

Parts p and q of Question 2L-8 request the type of rinse and its flow pattern. This information will help EPA to evaluate the method of rinsing with the volume of wastewater generated and the associated pollutant loadings.

The page which contains Question 2L-9 is formatted with a "stop" symbol at the top to request the number of operable acid regeneration plants that were on site during 1997. The respondent must complete Question 2L-9 for each operable acid regeneration plant counted within that number. If the site does not have any acid regeneration plants on site, the respondent is directed to skip to Question 2L-10.

Question 2L-9.a. requests the site designation of the plant for identification purposes. Parts b and c request what types of acid are regenerated and the volume of acid regenerated per day. EPA needs this information in order to evaluate waste generation by the type of operation and analyze whether a relationship exists between the volume of acid regenerated and the wastewater pollutant loadings generated.

Parts d and e request the name of the manufacturer of the acid regeneration plant and a description of the method of regeneration (including a list of products, by-products, and wastes generated). EPA needs this information in order to conduct an analysis of wastewater generation and pollutant loadings, as well as non-water quality environmental impacts, associated with acid regeneration operations.

Parts f and g of Question 2L-9 request the costs paid during 1997 for disposal of wastes or by-products, rate of disposal, revenue received during 1997 for sale of wastes or by-products, and rate of sale. EPA needs this information in order to analyze the costs associated with acid regeneration operations to properly estimate the costs associated with proposed regulatory options.

For a discussion of Questions 2L-10 and 2L-11, please refer to Questions 2A-8 and 2A-9.

The first page which contains Question 2L-12 is formatted with a "stop" symbol at the top to request the number of wastewater sources (excluding WAPC systems, process discharges, acid regeneration, and storm water) from acid pickling and/or descaling operations or acid regeneration that are present. The respondent must complete Question 2L-12 for each wastewater source counted within that number. If the site does not have other wastewater sources associated with acid pickling or descaling operations, the respondent is directed to skip to Question 2L-13. For a discussion of Question 2L-12, please refer to Question 2A-10.

For a discussion of Questions 2L-13 through 2L-15, please refer to Questions 2A-13 through 2A-15. The last page of Section 2L provides a table in which respondents may provide comments regarding the responses given in this section.

Section 2M: Cold Forming

For a discussion of the questions in Section 2M, please refer to Section 2K: Hot Forming.

Section 2N: Surface Cleaning and Coating

The first page of Section 2N is formatted with a "stop" symbol at the top to request the number of operable surface cleaning and/or coating lines or areas (as defined by site personnel) that were on site during 1997. The respondent must complete Question 2N-1 through 2N-8 for each operable surface cleaning and/or coating line or area counted within that number. Section 2N is very similar to Section 2L: Acid Pickling and Descaling (Including Acid Regeneration). The instructions indicate that the respondent should report a process line/area in one or the other of these sections, depending on what operations occur on the line.

For a discussion of most questions in Section 2N, please refer to Section 2L: Acid Pickling and Descaling (Including Acid Regeneration). Section 2N contains the same questions as Section 2L, with the exception of questions related to acid regeneration. In addition, Section 2N contains two additional parts to Question 2N-8 related to hot dip coating and electroplating. The remainder of this section only describes those questions that are not also located in Section 2L.

Part e of Question 2N-8 requests the type of metal applied in hot dip coating operations. Part f of this same question requests the type of metal applied in electroplating operations. EPA needs this information in order to estimate pollutant loadings of wastewaters generated from these operations. This analysis is necessary to develop appropriate estimates of costs associated with proposed regulatory options.

The last page of Section 2N provides a table in which respondents may provide comments regarding the responses given in this section.

Section 2P: Utility Operations (Including Intake Water Treatment and Steam and Power Generation)

The first page which contains Question 2P-1 is formatted with a "stop" symbol at the top to request the number of operable intake water treatment systems used to treat water prior to use in manufacturing processes or steam or power generation that were on site in 1997. The respondent must complete Question 2P-1 for each operable intake water treatment system counted within that number. If the site does not have any such intake water treatment systems, the respondent is directed to skip to Question 2P-2.

Part a of Question 2P-1 requests the site designation for the intake water treatment system for identification purposes. Part b requests the first year of operation for this system. EPA needs this information in order to consider the potential impact that age may have on the feasibility of, or cost associated with, candidate control technologies. The Agency will also consider age as a possible basis for subcategorization, subdivision, or segmentation of the industrial category. Finally, the Agency will determine if a relationship between treatment system age and wastewater generation exists.

Parts c and d of Question 2P-1 ask for the source of water treated by the system and the type of treatment method(s) and/or unit(s) employed. EPA needs this information in order to characterize the treatment system and its associated waste stream(s) and to understand

the ways in which each site achieves its level of treatment. The Agency will also use the information requested in these questions to evaluate the quality of water coming into the manufacturing processes and to identify candidate technologies for regulatory options.

For a discussion of Question 2P-1.e., please refer to Question 2A-16. Question 2P-1.f. asks for chemical additions to the treatment system. EPA needs this information in order to characterize the treatment system and to understand what pollutant parameters may be present in the intake water through the addition of treatment chemicals. The Agency will also use the information requested in these questions to identify candidate technologies for regulatory options.

Parts g through l of Question 2P-1 request the design flow of the water treatment plant, the average influent flow rate, the average discharge rate of treated water, the destination of the treated water, whether any wastewater is generated by this system, and the source of the wastewater. EPA needs this information in order to characterize the intake water treatment system, to determine the quality of the water that is used for on-site manufacturing processes, and to determine the size and cost of potential water pollution control equipment needed.

Parts m and n of Question 2P-1 request the average discharge rate from the treatment system and the specific destination of the discharge (including outfall numbers, permit monitoring locations, and/or contract haul locations). EPA needs this information to characterize the wastewater generation associated with the intake water treatment system, to determine what types of discharge and/or disposal are appropriate, and to correlate this information with information gathered through other sections of the survey and through other mechanisms.

The first page which contains Question 2P-2 is formatted with a “stop” symbol at the top to request the number of operable steam generation or power generation plants that were on site in 1997. The respondent must complete Question 2P-2 for each operable steam generation or power generation plant counted within that number. If the site does not have any such steam generation or power generation plants, the respondent is directed to skip to Question 2P-3.

Parts a and b of Question 2P-2 ask for the plant’s site designation and classification for identification purposes. Part c asks the respondent to indicate the manufacturing operation(s) for which steam or power is generated. EPA needs this information in order to attribute any wastewater and pollutant loadings generated at the power plant to the appropriate manufacturing operation. Depending on the size and type of the steam or power generation plant, these operations may not be covered by the Steam Electric Power effluent limitations guidelines and standards.

For a discussion of Question 2P-2.d., please refer to Question 2A-16.

Part e asks for the first year of operation at the steam or power generation plant. EPA needs this information to perform several analyses. The Agency will consider the potential impact that process age may have on the feasibility of, or cost associated with, candidate control technologies. The Agency will also consider process age as a possible basis for subcategorization,

subdivision or segmentation of the industrial category. Finally, the Agency will determine if a relationship between steam or power plant age and wastewater generation exists.

Part f asks what types of fuel are consumed in the plant. EPA needs this information in order to evaluate the potential wastewater pollutants that are associated with different fuels and also to analyze possible non-water quality environmental impacts associated with proposed regulatory options.

Part g requests the capacity and capacity utilization of each operable unit in the steam or power generation plant. EPA needs this information in order to determine the wastewater flow rate and pollutant loadings that would be associated with the greatest level of steam or power generation. EPA wants to ensure that candidate technology systems for regulatory options are designed to accept high flows associated with production at capacity.

For a discussion of Questions 2P-3 and 2P-4, please refer to Questions 2A-8 and 2A-9.

The first page which contains Question 2P-5 is formatted with a "stop" symbol at the top to request the number of wastewater sources (excluding WAPC systems and storm water) from intake water treatment or steam and power generating operations that are present. The respondent must complete Question 2P-5 for each wastewater source counted within that number. If the site does not have other wastewater sources associated with the utility operations, the respondent is directed to skip to Question 2P-6. For a discussion of Question 2P-5, please refer to Question 2A-10.

For a discussion of Questions 2P-6 through 2P-8, please refer to Questions 2A-13 through 2A-15. The last page of Section 2P provides a table in which respondents may provide comments regarding the responses given in this section.

(iii) Section 3: In-Process and End-of-Pipe Wastewater Treatment and Pollution Prevention Information

Section 3 includes questions which request information regarding on-site treatment of process wastewaters and pollution prevention practices. It is divided into two sections: Section 3A requests information regarding in-process and end-of-pipe wastewater treatment systems, with the exception of coke plant wastewater treatment systems already reported in Section 2A, and Section 3B requests information regarding plant-wide pollution prevention practices.

Although Section 3A requests information related to on-site treatment systems, the types of information requested are similar, and in some cases identical, to questions asked in Section 2A (note: Section 2A requested information on treatment systems at coke plants). Therefore, if a question is similar to a question from Section 2A, the reader is directed to the detailed description and the Agency need for that question in Section 2A.

Section 3A: In-Process and End-of-Pipe Wastewater Treatment Systems

The first page of Section 3A contains a screener check box question which asks whether any wastewater treatment is performed at the site, with the exception of coke plant wastewater treatment systems already reported in Section 2A. If no, the respondent is directed to Section 3B. If yes, the respondent is directed to a "stop" symbol which requests the number of operable wastewater treatment systems (broken out by in-process treatment, pretreatment, and end-of-pipe treatment systems) that were on site during 1997. Section 3A must be completed for each treatment system; therefore, these answers reflect the number of times Section 3A must be completed.

For a discussion of Questions 3A-1 and 3A-2, please refer to Questions 2A-17 and 2A-18. For a discussion of Questions 3A-3 through 3A-6, please refer to Questions 2A-20 through 2A-23. For a discussion of Questions 3A-7 through 3A-15, please refer to Questions 2A-25 through 2A-33.

The last page of Section 3A provides a table in which respondents may provide comments regarding the responses given in this section.

Section 3B: Plant-Wide Pollution Prevention Practices

This section asks respondents to provide a description of pollution prevention or management practices not previously identified throughout Section 2. These practices may be related to multiple processes or wastewater treatment systems. EPA needs this information in order to identify such practices, including innovative practices, that are being performed in the industry for possible inclusion in proposed regulatory options.

(iv) Section 4: Wastewater Outfall Information

Section 4 requests information regarding the discharge of waters. It is divided into two sections: Section 4A requests general discharge information and Section 4B requests information regarding discharges at permit monitoring locations.

Section 4A: General Discharge Information

Question 4A-1 asks the respondent to provide the total number of discharge locations (outfalls) and other permit monitoring locations that are present at the site. The respondent is then asked to provide, for each outfall or permit monitoring location, the site designation of the outfall or permit monitoring location, the type(s) of wastewater discharged through the location, and the discharge destination. EPA needs this information in order to characterize the site's discharges, and to correlate information gathered in this survey section with information gathered in other sections of the survey, and with information EPA has gathered through mechanisms other than the survey. In addition, EPA will use this information to aid in the review of analytical data submitted in Section 4B of the survey, to evaluate expanded use of the Water Bubble rule, and to conduct an environmental impact analysis.

Question 4A-2 requests at least one PFD that displays all internal and external permit monitoring locations and outfalls. The respondent is not required to develop a new diagram if an existing diagram has all required information. The respondent is asked to mark each diagram with the site ID number and a PFD number, so EPA survey reviewers may effectively locate and correlate all PFDs included in the survey response. A PFD presents a significant amount of technical data in a simple visual representation. EPA needs the PFD(s) requested in this question in order to identify the locations of permit monitoring locations and outfalls in relation to site processes and treatment systems.

The last page of Section 4A provides a table in which respondents may provide comments regarding the responses given in this section.

Section 4B: Discharges at Permit Monitoring Locations

The first page of Section 4B contains a "stop" symbol at the top to request the number of permit monitoring locations containing process wastewater or storm water associated with industrial activity that were on site during 1997. The respondent must complete Section 4B for each permit monitoring location counted within that number.

Question 4B-1 requests a description of the permit monitoring location. Part a requests the site designation for the location, part b asks whether the location is an internal or final outfall, and part c requests the destination to which water is discharged through the location. EPA needs the identity of the permit monitoring location in order to understand information gathered through Section 4B, and to correlate this information with additional information gathered through the survey and through other data collection mechanisms. EPA needs the discharge destination in order to study the waters discharged to the treatment works identified in Section 1 of the survey instrument, and/or to study the site's outfalls. EPA has requested the USGS Reach Number to aid the Agency's study of the environmental impacts associated with iron and steel discharges, and the potential impacts that may be associated with regulatory options to control these discharges. EPA will correlate information regarding the discharge of treated wastewater with data and information leading back to the generation of the wastewater.

Question 4B-2 asks the respondent to identify the sources contributing to the flow through the permit monitoring location. In addition, the respondent is asked to provide the average flow rate of each source and the period of discharge. EPA needs this information in order to identify the treatment systems that discharge to this location, to identify any untreated water that flows through this location, and to aid in evaluation of supplied monitoring data summaries.

Question 4B-3 requests identification of all regulated pollutant parameters, including temperature, regulated by the site's NPDES, state-issued, POTW, or PrOTW permits/agreements. In addition, the respondent is asked to indicate the monthly average and daily maximum limits for each pollutant, whether the pollutant has a monitor-only requirement, and whether the limit is based on water quality or on a local limit. EPA needs this information in order to study and characterize each site's discharge permit and to understand when local conditions are the primary factor in the site's permit limits.

Question 4B-4 requests summary information for all analytical data collected from this permit monitoring location during 1997. The respondent is asked to assign a unique sampling point (SP) number to each location, and to identify the location on the appropriate PFD with this SP number. In addition, the respondent is asked to provide the (1) treatment unit codes from where the wastewater stream is an effluent and to where the stream is an influent, or (2) the outfall to where the wastewater stream is discharged. The respondent is also asked to provide the pollutant parameter analyzed (using codes provided), the EPA analytical method used to analyze the samples, whether the samples were grab or composite, the total number of samples collected, the number of samples below the detection limit, the typical detection limit or range for the pollutant parameter, the average concentration and calculation methodology, the maximum and minimum concentration, and the average flow rate during sample collection. Guidance on the calculation of average concentration are provided in the directions.

EPA will combine the wastewater sampling data requested in this question with data collected through other mechanisms to characterize iron and steel industry wastewaters, to estimate industry pollutant loadings, and to identify sites at which data relevant to the rulemaking effort have been collected. The respondent is also asked to display the location of each SP on all PFD(s) included with this section. EPA will combine the wastewater sampling data requested in this question with data collected through other mechanisms to characterize iron and steel industry wastewaters, and to estimate industry pollutant loadings. Also, EPA will use the requested data to identify recipients for the Analytical Data Follow-up Question and to study the systems that iron and steel sites are using to meet the requirements of the current rule. As part of the rulemaking effort, EPA may sample water to characterize treatment system technologies at some iron and steel industry sites.

The last page of Section 4B provides a table in which respondents may provide comments regarding the responses given in this section.

(b) Part B: Financial and Economic Information

Part B of the detailed questionnaire will gather information necessary to complete an economic impact analysis of the effluent limitations guidelines and standards for the Iron and Steel industry. The questions are separated into four sections. Section 1 identifies the site, contact, and ownership structure. Section 2 requests more detailed information about the site, such as market value, balance sheet, and income statement information. Section 3 requests information about the business entity that owns the site. Section 4 requests information at the corporate parent level. Asking questions at different levels ensures that EPA will have sufficient information to evaluate regulatory impacts at all levels of economic activity.

To minimize the burden of responding to the survey, the respondent is asked to complete only applicable sections. The questions are phrased with commonly used terminology. Tables are organized with formats familiar to financial officers in the respondent industry. Questions requesting similar types of information are arranged together to facilitate review of the pertinent records and completion of the survey.

For some questions, three years of data are needed to provide information to identify industry trends, to resolve data anomalies, and to identify potential irregularities caused by events outside of the Iron and Steel industry's control. EPA requests financial and economic information for the fiscal years ending 1995, 1996, and 1997—the three most recent years for which data are available.

(i) Section 1: Site Identification

Information contact and site identification. Question 1 requests verification or correction of the site name and mailing address on the identification label. Question 2 requests the street address for the physical location of the site, if different from the mailing address. Questions 3 and 4 request the county and nearest street intersection, respectively. This information is needed to allow integration of the data with publicly available Census data in order to examine questions of environmental quality; the information is also used for the valuation of benefits and to address concerns of environmental justice (as required under Executive Order 12898). Question 5 asks for the site's DUNS number. The DUNS number is a unique nine-digit number assigned by Dun and Bradstreet Corporation to each business establishment (i.e, to each branch location, headquarters location, and single location establishment); these identification numbers, based on the Data Universal Numbers System, are referred to as DUNS numbers. Question 6 asks the respondent to identify an individual for EPA to contact concerning information submitted in Part B of the survey, as well as the days and times when he or she can be reached. This question is not duplicative of Part A Question 1-4 because the contacts for engineering and financial data are frequently different individuals. This information is needed in the event that clarification is needed for a response or set of responses.

Question 7 asks the respondent to confirm the type of iron and/or steel producing site. If the site does not fall into any of the types listed, the respondent is instructed to call the Help Line for further instructions. If a site does not fall into one of the listed site types, the survey design prevents the respondent from completing the survey. The Help Line will instruct the respondent to return the uncompleted survey once he or she has verified that the site does not correspond to any of the listed types.

Corporate hierarchy. Question 8 asks respondents to identify which chain of ownership best describes the site's corporate hierarchy. The corporate hierarchy pattern selected in this question determines which survey sections the respondent must complete. All sites must complete the site-level information requested in Section 2. Sites that are owned by a business entity or are part of a joint entity complete Section 3. Only sites with a corporate parent complete Sections 3 and 4. If the site is a separate entity, a wholly owned subsidiary, or part of a joint entity, Questions 9 and 10 request the site's corporation type and ask whether the site is publicly or privately owned. This information is necessary to determine a site's tax status and the availability of public data for the economic analysis.

(ii) Section 2: Site Financial Information

Section 2, the bulk of the Part B, focuses on collecting specific information about the site. In this section, all respondents provide site-level data covering site employment, revenues, costs, assessed value, product lines, and other elements.

Background information. Question 11 requests the site's primary and secondary Standard Industrial Classification (SIC) codes. This information is needed to evaluate the range of industries potentially affected by the rulemaking and the Small Business Administration's definitions of small business that could apply to the Iron and Steel industry. The latter are needed for the regulatory flexibility analysis. Question 12 asks for the starting month of the site's fiscal year in case it becomes necessary to adjust for technical information provided on a calendar basis and financial information provided on a fiscal year basis.

Discount rate. Questions 13 and 14 request the site's discount rate or cost of capital and the estimated interest rate to finance capital improvements. Question 15 asks about the appropriate mix of debt (Question 13) and equity (Question 14) used to finance capital improvements. The economic analysis will use these data to annualize the cost of future wastewater treatment investments.

Balance sheet information. Question 16 asks whether separate financial information is maintained for this site. Question 17 asks whether separate financial records are maintained for different product lines. A summary of the responses for these questions will indicate the level of precision and accuracy that can be associated with the responses to the remaining questions in Section 2. Questions 18 and 19 request balance sheet information for 1997. Question 18 requests asset data for the site. Entries are included for inventories, current assets excluding inventories, land, buildings, equipment, and cumulative depreciation for the site. Question 19 requests liability data for the site. Entries are included for current liabilities, long-term debt, retained earnings, and owner equity. The balance sheet data can be used to calculate a series of financial ratios that indicate financial health (e.g., current ratio, working capital-to-debt, and debt-to-assets).

Value of shipments to other sites under the same ownership. Question 20 asks for the value of shipments by product category to other sites under the same ownership for fiscal years 1995, 1996, and 1997. Question 21 asks how the transfer price for shipments to sites under the same ownership was determined. These questions are posed in order to determine whether or not the site is captive (i.e., the site exists for the benefit of other sites under the same ownership). If the site transfers products to other sites under the same ownership at production cost rather than market price, the site may not appear to be as profitable as it actually is. This would make the site's economic health seem worse than it actually is. Questions 20, 22, and 26 serve to identify such captive sites.

Site revenue information. Questions 22 through 25 request site revenue information for fiscal years 1995, 1996, and 1997. Question 22 requests the total value of coke, coke by-product, iron, and steel shipments from the site. Question 23 requests the total value of coke, coke by-product, iron, and steel shipments exported from the site. Question 24 requests the

total of all other revenues for the site. Question 25 requests the total site revenues. The information in Questions 22 through 25 may be used to identify the relative importance of each revenue source to the site's financial health.

Value of iron and steel shipments. Question 26 requests the value of iron and steel shipments from the site by product category and in total for fiscal years 1995, 1996, and 1997. Question 27 asks whether the dollar amounts given in the answer to Question 26 include shipping costs. This information is necessary to determine the impact of regulation on certain product categories (e.g., a site may suspend some product categories which involve more effluent in their production due to impending regulation; the decrease in supply of these product categories may be offset by increased production of these products by domestic firms better suited to cope with the regulation or foreign firms which are not subject to the regulation). EPA may choose to subcategorize, subdivide, or segment the industrial category by product type. If EPA does so, it would be required to evaluate economic achievability by subcategory, subdivision, or segment.

Value of exports. Question 28 requests the value of coke, coke by-product, iron, and steel exports from the site by product category and in total for fiscal years 1995, 1996, and 1997. Question 29 asks whether the dollar amounts given in the answer to Question 28 include shipping costs. This information is necessary to determine the impact of regulation on the exports of certain products and the impact on the balance of trade if production of these products were discontinued due to regulation.

Total quantities shipped by product category. Question 30 requests the total quantities of coke, coke by-product, iron, and steel shipments by product categories and in total for fiscal years 1995, 1996, and 1997. When aggregated over all sites, the information will be cross-referenced with industry and government data to identify and understand the relationship among the confidential and public data. This, in turn, allows EPA to make better use of public data for 1998 and future years. Comparing the site and aggregated industry data allows EPA to infer the relative importance of the site to the industry in general, and to specific product groups.

Total quantities produced by product category. Question 31 requests the total quantities of coke, coke by-product, iron, and steel produced by product categories and in total for fiscal years 1995, 1996, and 1997. Revenues (Question 26) divided by product shipped (Question 30) estimates unit prices while costs (Questions 32 through 34) divided by product manufactured (Question 31) estimates unit costs. The price/cost relationship is an integral component of understanding the market. In addition, the data from Question 30 can be subtracted from Question 31 to discern the site’s surplus production. That is, EPA may be able to determine if a site is increasing or decreasing inventory.

Cost information. Question 32 requests the production costs incurred at the site by product categories and in total for fiscal years 1995, 1996, and 1997. Question 33 asks whether the costs of coke production given in Question 32 include costs associated with maximum achievable control technology (MACT) or lowest achievable emissions rate (LAER) air pollution control costs. Question 34 requests the nonproduction costs incurred at the site for fiscal years 1995, 1996, and 1997. Entries are included for depreciation on buildings, plant,

equipment, and machinery at the site; corporate overhead; and other nonmanufacturing costs. Question 35 asks whether nonmanufacturing costs are allocated to product categories; Question 36 requests the method of this allocation, if any. A firm understanding of which costs are included at the site level is necessary to understand the price/cost relationship for the site as it is represented in the survey. Data from this set of questions, when combined with costs of various environmental regulations, also enable the economic analysis to estimate the likelihood of site closure. Depreciation is identified as a separate component to allow the analysis to be done on a cash flow basis should EPA deem it appropriate to do so.

Site income statement information. Question 37 requests income statement information through earnings before interest and taxes (EBIT) for site operations for fiscal years 1995, 1996, and 1997. The information requested includes total revenue, costs and expenses, and the net EBIT. All sites are expected to be able to complete an income statement through EBIT. Question 38 requests the remainder of income statement information (i.e., interest expenses, taxes, extraordinary items, and net income). Sites that do not maintain tax and interest records at the site level are not required to complete this question. Site income plays a crucial role in the site closure analysis.

Assessed value. Question 39 requests the assessed or appraised value for fiscal year 1997 land, buildings, and equipment and machinery owned by the site. In Question 40 the respondent indicates the basis on which assessed or appraised value is calculated (i.e., percentage of market value). EPA will use the assessed value combined with the percentage of market value as a second source of information to estimate the salvage value of the site's fixed assets, an integral part of the closure analysis.

Market value of equity. Question 41 requests the number of shares outstanding at the close of fiscal year 1997 and the market price per share at the close of fiscal year 1997. This information is used to determine the market value of equity, which is a crucial component of the model used to predict corporate financial distress. Companies which are not publicly traded and/or are operated by a business entity or corporate parent are prompted to mark the appropriate box.

Payment to local governments. Question 42 requests the value of payments of property taxes made to local government(s) in fiscal year 1997. This information is used to estimate the reduction in the revenue of local government(s) in the event of site closure (i.e., secondary impacts of the regulation). Impact of regulations on local governments is a component needed to address the Unfunded Mandates Reform Act.

Employment. Question 43 requests site-level employment data for fiscal year 1997. The question requests data on the average number of production employment (full- and part-time) and the average number of nonproduction employment. Respondents also provide the total number of employee hours for production employment and for nonproduction employment. If employment cannot be broken down into production and nonproduction employment, the respondent is prompted to provide this information in total only. This data will be used to estimate direct employment losses as the result of site closure. EPA will also use the employment data to develop estimates of community-wide impacts.

Site financial statements. Question 44 asks respondents to provide copies of accounting reports, annual reports, and/or 10-K forms if complete financial records are maintained at the site level.

Independent sites have now completed "Part B: Financial and Economic Information" of the detailed survey. Sites that operate under a larger business entity or are part of a joint entity proceed to Section 3 of the survey.

(iii) Section 3: Business Entity Financial Information

Only those sites that are owned or operated by a separate business entity or are part of a joint entity will answer questions in Section 3. Question 45 asks whether the business entity information is supplied with another questionnaire and, if so, it asks for the Survey ID Number of the questionnaire with the relevant business entity information. If the respondent provides this information, he or she is instructed not to complete Section 3. Data from this section will allow analysts to estimate the impacts of incremental pollution control costs on business entities that may own more than one site with coke-, iron-, or steelmaking operations.

This section requests background information similar to that which Sections 1 and 2 request, but for the business entity rather than the site. Question 46 asks for the business entity's DUNS number. Question 47 requests the name and mailing address of the business entity that operates the site. Question 48 asks whether the business entity is a joint entity. If so, the respondent is directed to list the names and mailing addresses of all business entities involved, but to complete Section 3 only for the business entity listed in Question 47.

Question 49 requests the primary and secondary SIC codes for the business entity, thereby allowing EPA to construct an understanding of how coke-, iron-, and steelmaking operations fit within typical corporate hierarchies. Questions 50 and 51 request the respondent to identify the organization type and whether the business entity is publicly or privately held. The information is used to ascertain the tax status and the availability of public information about the business entity for the economic analysis.

Question 52 asks whether the business entity owned or operated more than one site that conducted steelmaking or finishing—but not fabrication—operations in fiscal year 1997. Question 53 requests site name, location, type, and whether the site was constructed or acquired for any additional sites in areas to be regulated that are operated by the business entity in the United States. Question 54 asks when the business entity acquired the site in the survey. If the site was acquired or completed in 1997, very little site information may be available, although a complete set of information may be available for the business entity.

Question 55 requests the start month of the fiscal year. Question 56 requests the top five revenue-generating product lines for the business entity in rank order. This is necessary to determine the site's (and steelmaking's) relative contribution to overall corporate revenue. The remaining questions parallel those in Section 2. Questions 57 and 58 request interest and discount rates, respectively; Question 59 requests the mix of debt and equity used to finance capital improvements. The last items may be available at the business entity level but not at the site level.

Questions 60 and 61 request asset and liability information for the business entity for 1997. Questions 62 through 66 request revenue information for the business entity for fiscal years 1995, 1996, and 1997 (these questions parallel Question 22 through 25 at the site level).

Questions 67 through 70 request cost information for the business entity for fiscal years 1995, 1996, and 1997. Question 71 requests income statement information. The information requested in Question 71 is regularly kept at the business entity level; hence, EPA anticipates that all business entities will be able to report this information. The survey allows for identification and description of extraordinary items that may affect net income. EPA will use the information gathered in the balance sheet and income statements to calculate a series of financial ratios that indicate the baseline and post-compliance financial health of the business entity. Because many sites do not maintain debt and interest on their records, EPA anticipates obtaining a more complete set of financial data at the business entity level. Therefore, a larger selection of financial ratios can be analyzed for business entities. Additional financial ratios at this level of analysis could include debt-to-asset and times-interest-earned ratios.

Question 72 requests information on the market value of equity of the business entity. This information is a crucial component of the model used to predict corporate financial distress. Companies which are not publicly traded and/or are operated by a corporate parent are prompted to mark the appropriate box.

The Small Business Administration's definition of company size is based either on the number of employees or on revenues. For this reason, average number of employees for the company for fiscal year 1997 are requested at the business entity level (Question 73). Question 74 requests copies of the business entity's financial statements for fiscal years 1995, 1996, and 1997 for reference if the business entity is the highest level of ownership in the corporate hierarchy (i.e., if there is no corporate parent).

Business entities have now completed "Part B: Financial and Economic Information" of the detailed survey. Business entities that operate under a larger corporate parent proceed to Section 4 of the survey.

(iv) Section 4: Corporate Parent Financial Information

Only business entities that have a parent company will complete this section. Question 75 asks whether the corporate parent information is supplied with another questionnaire and, if so, it asks for the Survey ID Number of the questionnaire with the relevant corporate parent information. If the respondent provides this information, he or she is instructed not to complete Section 4. The respondent identifies the corporate parent's DUNS number (Question 76), the corporate parent's name and mailing address (Question 77), its primary and secondary SIC codes (Question 78), the year in which it acquired the business entity (Question 79), its type of organization (Question 80), whether the corporate parent is publicly or privately held (Question 81), the market value of equity for the corporate parent, if applicable (Question 82), and the total number of employees for the corporate parent in fiscal year 1997 (Question 83). Question 84 requests the corporate parent to submit copies of its financial statements for fiscal years 1995, 1996, and 1997 to complete the section.

(ii) Detailed Description of the Collection of 1997 Iron and Steel Industry Data - Short Form (Short Survey)

The Collection of 1997 Iron and Steel Industry Data - Short Form (Short Survey) is presented in Attachment 2. The Short Survey consists of two parts. Part A collects technical data, which will be used to determine industry production rates, water use and reuse in the processes, wastewater generation rates, pollution prevention techniques, and wastewater management, treatment and disposal practices. Part B collects financial and economic data, which will be used to characterize the economic status of the industry and to estimate economic impacts of wastewater regulations.

The Introduction to each part contains instructions for that part's completion, as well as one question and a choice of two certification statements. The question asks whether the site is engaged in iron or steel forming or finishing. If the answer is "no", the respondent does not have to complete that part of the survey, but must certify their response using certification statement #2 and indicate why the survey is not applicable (e.g., the site is a sales office). If the answer is "yes", the respondent is directed to complete the survey and certify their response using certification statement #1 when each part is complete.

(a) Part A: Technical Information

Part A of the Short Survey collects technical data, and is divided into an Introduction and three sections. Section 1 collects general site information, Section 2 collects manufacturing process information, and Section 3 collects in-process and end-of-pipe wastewater treatment and outfall information. The Agency needs the information collected in Part A to evaluate iron and steel industry processes and wastewaters, to analyze technically feasible control technologies, to assess technology costs, to evaluate the current subcategorization of the iron and steel industrial category, to calculate pollutant loadings and the pollutant reductions associated with the regulatory options, and to assess environmental impacts made by the iron and steel industry.

The questions in the Short Survey are a subset of the questions asked in the Detailed Survey. Table 4-1 presents a cross reference of the Detailed Survey question numbers that match up with the Short Survey questions. The reader may find the detailed discussions and justifications of these questions in Section 4(b)(i)(a) of this document.

TABLE 4-1
DETAILED AND SHORT SURVEY QUESTION CROSS REFERENCE

Survey Section	Short Survey Question[1]	Detailed Survey Question[1]
Introduction	Certification Statements 1 and 2	Certification Statements 1 and 2
Section 1: General Site Information	Q1-1 through Q1-4	Q1-2 through Q1-4, and Q1-7
	Q1-5	Q1-9.a., b., and d.
	Q1-6.a.	Q1-10.a. and Q1-11.a.

TABLE 4-1 DETAILED AND SHORT SURVEY QUESTION CROSS REFERENCE		
Survey Section	**Short Survey Question[1]**	**Detailed Survey Question[1]**
Section 1: General Site Information (Continued)	Q1-6.b. through f.	Q1-10.c. and e. through h.
	Q1-7	Q1-14
	Q1-8	Q1-19
	Q1-9*	NA
	Q1-10	Q1-20
Section 2A: Forming Operations	Q2A-1 and Q2A-2	Q2K-1 and 2K-2
	Q2A-3*	NA
	Q2A-4	Q2K-6.a. and c.
	Q2A-5	Q2K-11
	Q2A-6	Q2M-8
	Q2A-7.a. and b.	Q2K-12.a. and b.
	Q2A-7.c.*	NA
	Q2A-8	Q2K-7
	Q2A-9	Q2K-9
	Q2A-10	Q2K-4
	Q2A-11	Q2K-13.a., c. through g., and i. through m.
	Q2A-12	Q2K-14.a. through c., f. through j., and l. through p.
	Q 2A-13	Q2K-16.a., c., and d.
	Q2A-14	Q2K-15.a.
	Q2A-15	Q2K-20
Section 2B: Surface Treatment	Q2B-1 and Q2B-2	Q2L-1 and Q2L-2
	Q2B-3	Q2K-8 (not in Section L or N)
	Q2B-4	Q2L-3
	Q2B-5	Q2L-5
	Q2B-6	Q2L-6
	Q2B-7.a. and b.	Q2L-7.a. and b.
	Q2B-7.c.*	NA
	Q2B-8.a. through d.	Q2L-8.a through d.

TABLE 4-1 DETAILED AND SHORT SURVEY QUESTION CROSS REFERENCE		
Survey Section	**Short Survey Question[1]**	**Detailed Survey Question[1]**
Section 2B: Surface Treatment (Continued)	Q2B-8.e. and f.	Q2N-8.e. and f.
	Q2B-8.g. through j.	Q2L-8.e. and f., h. and i.
	Q2B-8.k.	Q2L-8.j. and m.
	Q2B-8.l.	Q2L-8.k. and n.
	Q2B-8.m. and n.	Q2L-8.l. and o.
	Q2B-8.o. and p.	Q2L-8.p. and q.
	Q2B-9	Q2L-9
	Q2B-10.a. through m.	Q2L-10.a. through c., f. through j., and l. through p.
	Q2B-11	Q2L-12.a., c., and d.
	Q2B-12	Q2L-11.a.
Section 2C: Pollution Prevention Practices (Including Waste Reduction and Process Recycling)	Section 2C	Q2A-15, Q2B-17, Q2C-16, Q2D-12, Q2E-11, Q2F-18, Q2G-18 Q2H-8, Q2I-8, Q2J-8, Q2K-19, Q2L-15, Q2M-17, Q2N-14, Q2P-8, and Section 3B
Section 3A: In-Process and End-of-Pipe Wastewater Treatment Systems	Q3A-1	Q3A-3
	Q3A-2	Q3A-1
	Q3A-3	Q3A-2
	Q3A-4	Q3A-4
	Q3A-5.a.	Q3A-5
	Q3A-5.b.	Q3A-15
	Q3A-6	Q3A-6
	Q3A-7	Q3A-7
	Q3A-8	Q3A-9
	Q3A-9	Q3A-10
	Q3A-10	Q3A-13

TABLE 4-1 DETAILED AND SHORT SURVEY QUESTION CROSS REFERENCE		
Survey Section	**Short Survey Question[1]**	**Detailed Survey Question[1]**
Section 3B: General Discharge Information	Q3B-1	Q4A-1
	Q3B-2	Q4A-2
	Q3B-3.a.	Q4B-1.a.
	Q3B-3.b.	Q4B-3.
	Q3B-4.a. and b.	Q3A-14.a. and b.
Section 3C: Monitoring Data	Q3C-1.a.	Q4B-1.a. and Q4B-4.a.
	Q3C-1.b.*	NA
	Q3C-2	Q3A-11
	Q3C-3	Q3A-12

[1]NA = Not applicable, * = denotes a new question

As noted in Table 4-1, there are five new questions in the Short Survey. These new questions have been added to gather some basic information about the manufacturing process or site, and eliminates other questions from the Detailed Survey.

Question 1-9 asks whether the site pretreats intake water, or whether the site generates steam or power for on site use. The Short Survey does not request any detailed information on these operations. The Agency plans to use the responses to these questions to transfer appropriate wastewater flow and pollutant loadings data from responses to the Detailed Surveys to model these on-site utility operations.

Question 2A-3 request whether the section is being completed for a hot forming or a cold forming process. This question was not required in the Detailed Survey because each type of forming process was reported in it's own section. This information is needed to properly classify responses by the type of manufacturing process.

Questions 2A-7.c. and 2B-7.c. request the identification, shape, and dimensions of the product with the second highest production for 1997. This information is needed in order to evaluate possible subcategorization of the industry. Because of the variance in product dimensions, different products may generate significantly different volumes of wastewater on a weight basis (i.e., gallons wastewater per ton of product cast). The Agency must base a production-normalizing factor on the most appropriate and reasonable measure when developing production-based regulatory options. EPA will consider several options for a measure of hot forming production, including the surface area of the products formed in the hot forming process. In addition, EPA will consider as a possible subcategorization or segmentation factor the configuration of the hot forming process and whether products of one size versus products of many sizes and dimensions are formed.

Question 3C-1.b. requests the percent of process wastewater from iron and steel operations at this permit monitoring location. The Short Survey does not require respondents to provide a list of each source contributing to the flow at this location, as is requested in Detailed Survey Question 4B-2. Therefore, EPA needs the information requested in Short Survey Question 3C-1.b. in order to determine whether the analytical data summary provided for this monitoring location is representative of iron and steel operations.

The last page of the Short Survey provides a table in which respondents may provide comments regarding the responses given in this survey.

(b) Part B: Financial and Economic Information

The financial and economic information collected in the Short Survey is necessary to complete the economic analysis of the effluent limitations guidelines and standards for the Iron and Steel industry. EPA does not anticipate substantial requirements or costs for the population that receives the Short Survey relative to the population that receives the Detailed Survey. For this reason, EPA does not anticipate substantial impacts but needs to address the requirements of the Clean Water Act, Small Business Regulatory Enforcement Flexibility Act (SBREFA), and various Executive Orders. Because these are not as operationally complex as those that receive the Detailed Survey, EPA does not need the additional questions to track the disposition and revenue streams associated with intermediate processes and products as they flow through the site. The analyses for the Short Survey population, therefore, will not be as extensive or in-depth as those the Detailed Survey population. For example, since EPA can evaluate impacts based on only a single year of data for the first population, trends over time can not be analyzed. For the second population, however, EPA can develop multiple forecasting methods since the several years of data provided will allow EPA to identify trends over time (i.e., over the business cycle).

To minimize the burden of responding to the Short Survey, EPA has limited the information it requests. The questions are phrased with commonly used terminology and the tables are organized in formats familiar to financial officers in the respondent industry.

Question 1 requests the street address of the site, which may differ from the mailing address. The respondent is asked to identify the county in which the site is located to facilitate access to Census information concerning county unemployment rates and demographic information.

Question 2 asks the respondent to identify an individual for EPA to contact concerning information submitted in Part B of the Short Survey, as well as the days and times when he or she can be reached. This information is needed in the event that clarification is needed for a response or set of responses.

Question 3 requests the name and address of the company that owns the site. Because all sites that receive the Short Survey answer this question, the data will be used to group sites by company in order to aggregate costs and evaluate impacts on the company level.

Question 4 requests the company's corporation type. Question 5 asks whether the company is publicly or privately owned. This information is necessary to determine a company's tax status and the availability of public data for the economic analysis.

Question 6 asks the respondent to identify the number of iron and steel sites owned by the company. The response to Question 6 allows EPA to verify its findings when it aggregates data on the basis of information supplied in Question 3.

Question 7 requests the respondent to identify the 4-digit Standard Industrial Classification (SIC) code assigned to the company. The Small Business Administration defines small businesses by 4-digit SIC code with criteria based on revenue or the number of employees.

The respondent lists the number of employees at the site and company in Question 8. The number of employees at the site allows EPA to estimate direct impacts on employment from affected sites. The number of employees at the company allows EPA to identify small businesses if the latter are in an SIC code with that criterion.

Question 9 is an income statement that the respondent completes for the company and site for 1997. It is in a format familiar to financial officers. Item a, net sales, is used in SBREFA tests. Item b, other income, allows EPA to evaluate the importance of business activities not related to the rule to the site and company. Item c, total revenues, is the sum of items a and b. Costs are requested in items d through f. Depreciation is requested as a separate entry to allow EPA to calculate cash flow. Item g is the total of costs and expenses. Item h, earnings before interest and taxes (EBIT), is the difference between revenues (item c) and costs (item g). It is a common component in financial ratios. Items i and j— interest expense and taxes, respectively—may only be allocated at the company level and not the site level. The inclusion or exclusion of interest and taxes will help EPA interpret the responses given for net income for the company and site.

Question 10 is a balance statement that the respondent completes for the company and site for 1997. A comparison of the company and site entries allows EPA to evaluate the relative importance of the site to the company and what liabilities are or are not recorded on the site's books.

Together, Questions 9 and 10 supply the basic information for evaluating site and company impacts through cash flow and financial ratio analyses. Question 11 requests the financial statements with accompanying notes for 1997. The information supplied in Question 11 allows EPA to verify the information provided in Questions 9 and 10. The notes to the financial statements may explain any potential discrepancies in the data provided in Questions 9 and 10 prior to EPA contacting the respondent for additional data.

(iii) Detailed Description of the Collection of Iron and Steel Industry Wastewater Treatment Capital Cost Data (Cost Survey)

The Cost Survey, presented in Attachment 3, consists of three questions that collect capital cost information on specific wastewater treatment system upgrades or installations identified in Part A of the Detailed and Short Surveys. EPA will provide a list of site-specific projects for which capital cost data are being requested. The Cost Survey questions must be completed for each project in the list.

Question 1 asks for primary and secondary site contacts for information supplied in the Cost Survey. EPA needs this information in order to contact the appropriate person if any clarification of responses is required.

Question 2 asks the respondent to attach any engineering drawings for this project that were not included with the original survey response. EPA needs this information in order to understand the details of the project, such as site piping requirements, to be able to compare capital costs supplied by the site at the same level of detail that the Agency will use in calculating capital costs for proposed regulatory options.

Questions 3 and 4 request capital costs associated with this project and the year the cost was incurred. EPA will use the information requested in this question to perform economic analyses necessary to the development of regulatory options, including analyses of treatment technology costs and analyses of overall wastewater treatment costs. EPA will combine the costs requested in this question with other treatment system costs to determine if proposed regulatory options are "economically achievable." In addition, EPA will combine the cost data requested in this question with other wastewater treatment costs in order to determine the total cost that each site currently incurs in treating wastewater, and to determine the financial impacts that proposed regulatory options may make on each site.

The last page of the Cost Survey provides a table in which respondents may provide comments regarding the responses given in this survey.

(iv) Detailed Description of the Production Follow-up Question to the Collection of 1997 Iron and Steel Industry Data

The Production Follow-up Question will request production hours per month for the past five years at each on-site manufacturing process. If it is more convenient for the site, the respondent may instead provide production turns per month and provide the number of hours per turn. EPA will provide the monthly production data for 1993 through 1997 provided by the site in the Detailed Survey for reference. For Short Survey respondents, EPA will provide the annual production data for 1993 through 1996 and the monthly production data for 1997. Short Survey respondents will also be asked to provide monthly production data for 1993 through 1996.

EPA needs this information in order to better understand the monthly and daily production variability that can occur in the iron and steel industry. EPA will analyze hourly, monthly (adjusted for hours per month), and annual (adjusted for hours per year) production rates to determine an appropriate production basis to use for calculating permit limitations. These data will also be used to evaluate the type of permit monitoring requirements that are appropriate.

(v) Detailed Description of the Analytical Data Follow-up Question to the Collection of 1997 Iron and Steel Industry Data

The Analytical Data Follow-up Question will request compliance and other monitoring data in the form of individual data points based on EPA's review of summary data provided in the Detailed and Short Surveys. EPA needs individual monitoring measurements, both in-plant and final effluent, for engineering analyses (e.g., estimating baseline pollutant loadings or estimating pollutant removals associated with proposed regulatory options) and statistical analyses (e.g., variability). The summaries of data provided by respondents in the Detailed and Short Surveys include only the minimum and maximum detections of a pollutant, the average concentration of that pollutant, and the number of times the pollutant was not detected. These data summaries serve as a good screener to identify the most useful analytical data available in the industry. EPA will provide the summary of the monitoring data from the Detailed or Short Surveys to the site for reference.

(vi) Collection of 1997 Iron and Steel Industry Data Respondent Activities

Respondents will engage in the following activities to respond to the Collection of 1997 Iron and Steel Industry Data:

- Distribute survey sections to qualified respondents;
- Review survey instructions;
- Gather requested information and data;
- Complete survey instrument(s);
- Review survey response(s);
- Mail completed survey response(s).

None of the activities associated with the Collection of 1997 Iron and Steel Industry Data is considered to be a customary and usual business practice.

5. THE INFORMATION COLLECTED--AGENCY ACTIVITIES, COLLECTION METHODOLOGY, AND INFORMATION MANAGEMENT

5(a) AGENCY ACTIVITIES

The Collection of 1997 Iron and Steel Industry Data has been developed by EPA's Engineering and Analysis Division (EAD). EAD has planned for and allocated resources for the efficient and effective management of the information to be collected. EPA is conducting the following activities in administering the Collection of 1997 Iron and Steel Industry Data:

- Design the survey instruments;
- Create a mailing list database;
- Provide copies of the survey instruments to industry trade associations for review;
- Meet with trade association representatives to discuss the data collection and the burden associated with its administration;
- Publish a notice in the Federal Register to announce the upcoming ICR;
- Consider and respond to all comments received, and revise the data collection based on these comments;
- Develop the ICR package, and submit the package to OMB;
- Design a system to track mailing and receipt activities;
- Mail survey instruments;
- Develop and maintain Help Lines and Internet addresses for technical and economic assistance;
- Conduct survey workshops (budget permitting);
- Maintain the tracking system;
- Implement appropriate procedures for handling CBI responses;
- Develop guidelines for reviewing and coding the responses;
- Develop electronic databases, data entry systems, and documentation;

- Review and code survey responses for input to an electronic database;
- Collect missing information;
- Enter and verify data in the database.

The Agency will use the data collected through the Collection of 1997 Iron and Steel Industry Data to characterize pollutant discharges from iron and steel sites, and to develop regulatory options to control these pollutant discharges. Specifically, EPA will establish current baseline estimates of industry-wide production-normalized wastewater flow rates, pollutant concentrations, and loadings in order to analyze the engineering costs of compliance, economic impacts, and environmental benefits of each regulatory option. Ultimately, the Agency will select appropriate regulatory options for the industry, and will revise the Iron and Steel Manufacturing Effluent Limitations Guidelines and Standards to reflect any new model technologies chosen by the Agency as the basis for these guidelines and standards.

5(b) COLLECTION METHODOLOGY AND MANAGEMENT

The Agency will administer the Detailed Survey and the Short Survey as a census. The Detailed Survey will be administered to 244 sites, including integrated steel sites (with and without cokemaking), non-integrated steel sites (with and without finishing), stand-alone cokemaking sites, stand-alone direct-reduced ironmaking or sintering sites, stand-alone finishing sites, and stand-alone hot forming sites. The Short Survey will be administered to 657 sites, including stand-alone cold forming sites, stand-alone pipe and tube sites, stand-alone hot dip coating sites, and stand-alone wire sites. The Agency specifically designed a shorter, less burdensome survey for the majority of steel sites, which are expected to contribute a minority of the pollutant loading generated by this industry.

Following receipt and review of the Detailed and Short Survey responses, EPA will administer the Cost Survey to no more than 100 sites that have implemented candidate control technologies considered for regulatory options. EPA will also administer two follow-up questions to no more than 100 sites each to (1) evaluate production basis options for the current iron and steel industry production-based regulatory scheme, as well as alternative schemes, and (2) estimate pollutant loadings and variability. EPA has reduced the burden to the industry of this data collection by targeting these anecdotal studies pertaining to detailed cost and production questions to a subset of the industry identified from responses to the Detailed and Short Surveys, rather than requiring all sites to provide this same level of information.

The iron and steel industry includes sites engaged in the following manufacturing processes: cokemaking, sintering, briquetting (and other agglomeration processes), ironmaking, steelmaking, vacuum degassing, ladle metallurgy (and other refining processes), casting, hot forming, acid pickling, descaling, acid regeneration, cold forming, and surface cleaning and coating (including alkaline cleaning, hot dip coating, and electroplating). The Agency designed the survey mailing list database using information from the following sources:

- Association of Iron and Steel Engineers 1997 Directory: Iron and Steel Plants Volume 1, Plants and Facilities;

- Iron and Steel Works of the World (12th edition) directory;

- Iron and Steel Society's Steel Industry of Canada, Mexico, and the United States: Plant Locations map;

- Member lists from the following trade associations:

  — American Coke and Coal Chemicals Institute,
  — American Galvanizers Association,
  — American Iron and Steel Institute,
  — American Wire Producers Association (accessed through publicly available records),
  — Cold Finished Steel Bar Institute,
  — Specialty Steel Industry of North America,
  — Steel Manufacturers Association,
  — Steel Tube Industry of North America,
  — Wire Association International;

- Dun and Bradstreet Facility Index database;

- EPA Permit Compliance System (PCS) database;

- EPA Toxic Release Inventory (TRI) database;

- Iron and Steelmaker Journal "Roundup" editions:

  — Electric arc furnace (5/96),
  — Blast furnace (8/96),
  — Continuous caster (11/96),
  — Electric arc furnace (5/97),
  — Blast furnace (8/97),
  — Continuous caster (11/97);

- 33 Metalproducing Journal "Roundup" editions (5/89 and 5/91):

- 33 Metalproducing Journal "Census of the North American Steel Industry":

  — Integrated ironmaking, steelmaking and continuous casting operations (3/96),
  — Integrated mill rolling and finishing operations (7/96),
  — Steel processors (9/96),

— Specialty steelmakers (10/96),
— Mini mills and market mills (11/96),
— Pipemaking/tubemaking (3/97).

All of the above listed sources were used to determine the number of recipients for the Detailed Survey (244 sites) and the Short Survey (657 sites). These sources were cross-referenced with one another to obtain site level information and to ensure the accuracy and applicability of each site's information before inclusion in the survey mailing list.

Site level information was readily available for the all Detailed Survey recipients and the majority of the Short Survey recipients, with the exception of the stand-alone wire segment. Member lists from the Wire Association International (WAI) and publicly available member lists from the American Wire Producers Association (AWPA) provided firm level information for the stand-alone wire segment. In order to obtain site level information, the EPA cross-referenced this firm level information with the Dun and Bradstreet Facility Index database. However, the Dun and Bradstreet data did not yield site level information for all of the firms. The Agency consulted other literature sources, but was unable to obtain site level information. Therefore, the EPA will administer the Short Survey to identified stand-alone wire sites and firms. The cover letter to the Short Survey will instruct firms to provide mailing addresses for any sites not already identified by the Agency. EPA estimates that 300 sites will ultimately receive the Short Survey.

EPA will administer the Collection of 1997 Iron and Steel Industry Data in hard copy format. Respondents may download additional copies of the survey (or individual sections) from EPA's web site or contact EPA, if additional blank copies are necessary. However, the Agency requires that respondents submit their completed surveys in signed, certified, hard copy format.

EPA considered administering the data collection surveys in an interactive, electronic format. However, the development of electronic surveys is not considered efficient for the following reasons:

- The expense of developing and testing an electronic survey is not cost effective because this Data Collection is a one-time survey effort. Because the surveys will not be reused, neither the respondents nor the EPA would benefit from an electronic copy of the survey.

- Due to the amount of detailed information required for the effective review and revision of iron and steel industry effluent limitations guidelines and standards, the Detailed and Short Surveys are complex. EPA has utilized several features, including nested questions, to increase the efficiency with which the respondent can complete the survey form. EPA would incur an

increased burden in programming these special features into an interactive, electronic format.

- EPA could not be sure the software at respondent facilities would be compatible or that electronic responses would be correctly formatted. If the survey were administered in interactive, electronic format, it may be necessary for EPA to make an increased effort to clarify responses.

- The Agency would incur an increased burden in maintaining a computer support Help Line, in addition to the already established technical information and financial and economic information Help Lines.

- Through other effluent guidelines projects, EPA has established mechanisms, including double-key entry, verification, and resolution systems, for effective and efficient data entry from hard copy surveys. If the surveys were administered in electronic format, EPA would incur increased burden in designing a front-end electronic system.

EPA has determined that the option to administer the Collection of 1997 Iron and Steel Industry Data in electronic format is precluded by the added cost and increased burden that would be incurred.

Although EPA has chosen not to administer the survey in an interactive, electronic format, the Agency has used information technology throughout the development of the survey, and will continue to use this technology to optimize the efficiency of both Agency and respondent activities associated with the survey. For example, the Federal Register notice announcing the Agency's intent to submit the Collection of 1997 Iron and Steel Industry Data ICR to OMB provided an Internet address where commenters and interested members of the public could locate and download an electronic version of the survey, if they chose not to request a hard copy version from the Agency. The Federal Register notice accompanying the ICR submission to OMB includes an Internet address at which commenters and interested members of the public may download the entire Collection of 1997 Iron and Steel Industry Data ICR package, as well as the survey mailing list. Also, EPA has requested electronic versions of permit monitoring data to assist in the technical review of the survey responses. Finally, EPA will provide technical information and economic information Internet addresses through which survey respondents may obtain Help Line assistance.

EPA will distribute the survey instruments via Federal Express or a comparable carrier that requires a signature to acknowledge receipt of delivery. Through this process, EPA will ensure that each designated site receives the survey, and that a preliminary point-of-contact (the signee) has been identified. From the date of receipt, integrated steel sites will have 120 calendar days and all other iron and steel sites will have 90 calendar days to respond and return the completed Detailed or Short Survey to the Agency. Sites will have 45 calendar days from the date of receipt to respond and return the completed Cost Survey, production follow-up question, or analytical data follow-up question.

EPA will maintain a toll-free technical information Help Line and a toll-free financial and economic information Help Line for all survey respondents. These Help Lines will be staffed with trained contractor personnel during normal business hours. In addition, EPA will provide Internet electronic mailing addresses that respondents may use to obtain assistance. In every case, Help Line and Internet staff will work to provide respondents with immediate assistance.

Each mailed survey will have a unique site identification number. EPA will use an electronic tracking system to record, for each identification number, the date the survey package was distributed, the date the site received the survey package (i.e., the date on which a respondent signed for the delivery of the survey package), the dates of any necessary follow-up letters or telephone calls to respondents, and the date EPA receives the completed survey. The identification number will also serve as a site identification code for data entry in the survey database.

EPA will work with iron and steel industry trade associations to conduct survey workshops, as budgets permit. During these workshops, representatives from the Agency will provide guidance, training, and assistance to respondents.

EPA and its contractors will review completed surveys and perform coding and data entry of survey responses. The coded survey responses will be entered into a database designed to ensure the complete retrieval of all data necessary for thorough technical and economic analyses.

5(c) SMALL ENTITY FLEXIBILITY

This section provides a description of the steps EPA has taken to minimize respondent burden and a justification of the need for a census. To minimize burden, EPA:

- Did not administer a screening survey.
- Divided the population into two major strata.
- Designed two surveys of differing length, one for each major stratum (called “Detailed” and “Short”).
- Designed a modular Detailed Survey for technical information; only Part A sections applicable to a site will be mailed to a site. For example, a stand-alone cokemaking site will receive only Sections 1, 2A, 2P, and 4 from Part A of the Detailed Survey.
- Designed a modular Detailed Survey for financial and economic information; the respondent completes only those sections appropriate for the site’s corporate hierarchy. For example, a respondent for a business with no more than one site would complete only Part B: Sections 1 and 2.

For a site with a business entity and corporate parent, the respondent would complete all four sections in Part B.

- Designed Part B of the Detailed Survey such that every additional section that a respondent must complete contains fewer and less complex questions than the preceding section.

Small entities are likely to have simple corporate hierarchies and fewer operations. As such, they are likely to receive the Short Survey. If they receive the Detailed Survey, they are likely to be required to complete a smaller number of sections in both Part A and Part B than other entities receiving the Detailed Survey.

EPA evaluated whether the Short Survey could replace the Detailed Survey and determined it could not. The Detailed Survey will be administered to sites with large and complex operations, and which are expected to contribute the majority of wastewater flow and pollutant loadings from this industry. EPA will use this information in deciding whether to establish subcategories, subdivisions, or segments for this industry and in evaluating the economic achievability of the regulatory options associated with any such subcategories, subdivisions, or segments. The information collected in the Detailed Survey will help EPA to understand the process flow through all the operations, the financial implications of the interrelated processes, and the use, reuse, and final disposition of water and wastewater. Operational complexity is a defining characteristic of the stratum scheduled to receive the Detailed Survey. The site-level information collected in the Short Survey may be insufficient to allow EPA to develop subcategories, develop options for each of the subcategories, and evaluate the economic achievability of each option for sites in this stratum.

EPA evaluated whether a sample or census was needed for the Detailed Survey stratum. EPA determined that a census was needed for several reasons. One, because of the unique combination of factors that characterize each site in the Detailed Survey stratum, a census is necessary to develop a database from which EPA can base its subcategorization of the industry. Two, a census is needed to provide the complete set of configurations (e.g., subcategory combinations occurring at a given site) to develop guidance for permit writers for the final rule. Three, each site in this stratum has a unique or near-unique financial and economic configuration. A census is needed in order to allow EPA to evaluate the economic achievability of the various regulatory options for each subcategory. Four, a census is necessary to ensure that private entities—for which, by definition, financial and economic information is not publicly available—are adequately represented and analyzed in EPA's economic analysis. Five, the determination of environmental benefits will be uncertain without a census. Six, the sites in the Detailed Survey stratum are likely to have complex ownership arrangements. Without a census, it may not be possible to estimate the full universe of affected firms necessary to profile the industry.

EPA determined that a Short Survey was appropriate for the second major stratum in the population. EPA did not administer a screening survey, in part, because it could reasonably identify the names and addresses of sites affected by the rule. EPA, however, does not have basic information necessary to develop effluent limitations guidelines and standards or to evaluate the

economic achievability of the various regulatory options. The Short Survey is designed to obtain a limited amount of basic information, such as discharge status, flow rates, production, corporate ownership, and financial information. EPA believes it can develop appropriate effluent limitations guidelines and standards with the limited information for this stratum in the population because the operations at each site are believed to be far less complex than for sites in the Detailed Survey stratum and because detailed technical data can be transferred from Detailed Survey responses. The corporate hierarchy at each site in the stratum is likely to be no more than a site and the business entity that owns it.

EPA determined that a census was necessary for the Short Survey for a number of reasons. Two major reasons for needing a census are the absence of a screening survey and the need to perform the analyses required by the Regulatory Flexibility Act as amended by the Small Business Regulatory Enforcement Flexibility Act (SBREFA). SBREFA requires EPA to determine whether the rule will have a significant economic impact on a substantial number of small entities. EPA, therefore, needs (1) an accurate count of small businesses, and (2) to be able to map the costs for all sites back to the company that owns them to respond to SBREFA.

EPA encountered several difficulties when addressing SBREFA requirements where a population was sampled. The sample design for these earlier rulemaking efforts were designed prior to SBREFA while promulgation and proposal came after SBREFA. These difficulties include:

- A basic mismatch exists between the unit of measurement for effluent guideline development and SBREFA concerns. The unit of measurement for developing effluent guidelines is the site. The unit of measurement for addressing SBREFA is the business entity that owns the site (and possibly many others) because the Small Business Administration definition for small business is based on the company, not the site.

- This mismatch led to EPA being unable to estimate the number of companies affected by the rule, regardless of whether they were large or small. Statistical methods exist for deriving the number of businesses from a sample stratified on site characteristics, but this approach leads to a very large sampling fraction or an unacceptable level of precision in the estimate. For iron and steel industry sites that are expected to have relatively low wastewater flows and pollutant loadings, EPA decided to trade collecting in-depth information (through administration of the Detailed Survey) from a sample of facilities for collecting a minimum amount of information (through administration of the Short Survey) from a census of this population. The information collected in the Short Survey would allow EPA to address SBREFA, as well as allow the transfer of technical data from Detailed Survey respondents. Again, the short survey is necessary because no screening survey was administered.

- Conducting a sample may lead to not having any information on small, but existing, groups of dischargers. For example, one sample for an effluent guideline identified no direct dischargers for a subcategory when direct dischargers were known to exist. The initial sample contained direct dischargers, but these were determined, after data collection, to be covered by other effluent guidelines. Again, EPA determined to avoid this situation by trading in-depth information for adequate coverage of the population.

- Conducting a sample may lead to sample weights that are unacceptably large for the purpose of addressing SBREFA and economic achievability. In several examples, a single facility had a sampling weight in excess of 70, after adjusting the weight for out of scope and out of business responses, and other post-sampling factors. EPA could determine whether the facility belonged to a small business, but not the number of small businesses in the industry category (see first two bullets). The SBREFA analysis, therefore, had to be based on the count of facilities that belonged to small businesses, not the count of small businesses. The results of whether an option could be certified to have no significant economic impact on a substantial number of small entities could have depended on the results of this one facility. For the iron and steel industry, EPA determined to avoid the situation by censusing the population.

- To determine the impact of the rule on a company, EPA needs to estimate the combined costs for all the sites owned by the company. EPA therefore needs information on all the sites owned by the company. Because there was no screening survey, a census is needed for the short form population to be able to identify all the sites belonging to a company, whether the company is large or small, and the costs associated with increased pollution control for each site.

Executive Order 12866 requires EPA to evaluate the benefits, as well as the costs, of the rule. Unless the population is stratified on the basis of discharge status and receiving water characteristics, EPA might not be able to estimate the full benefits of the rule. Because there was no screening survey, EPA does not have the information necessary to stratify the sample for this purpose.

Finally, the population targeted to receive the Short Survey is more likely to be both small and privately-held. The survey is the only source of information for such entities. A census is necessary to ensure that private entities—for which, by definition, financial and economic information is not publicly available—are adequately represented and analyzed in EPA's economic analysis.

5(d) COLLECTION SCHEDULE

The schedule for the data collection activities associated with the Collection of 1997 Iron and Steel Industry Data is presented in Table 5-1:

TABLE 5-1
COLLECTION SCHEDULE

Action	Approximate Number of Calendar Days Following OMB Approval Until Action is Completed
Detailed and Short Surveys mailed	43
Receive all Detailed and Short Survey responses, with exception of integrated steel sites	133
Receive all Detailed Survey responses from integrated steel sites	163
Cost Survey and Production Follow-up Question mailed	283
Receive all Cost Survey and Production Follow-up Questions	328
Review and code all Detailed and Short Survey responses	373
Review and code all Cost Surveys and Production Follow-up Question	388
Collect all missing or incomplete information	463
Enter all coded responses in database	498

6. ESTIMATING THE BURDEN AND COST OF THE COLLECTION

6(a) ESTIMATING RESPONDENT BURDEN

On October 20, 1997, EPA published a notice in the Federal Register (Volume 62, Number 202, Pages 54453-54454) announcing the Agency's intent to submit the 1997 Iron and Steel Industry Survey ICR to OMB. Prior to the publication of the notice, EPA directly requested comment regarding the survey and its associated estimates of burden from seven trade associations representing the iron and steel industry. Following the publication of the Federal Register notice, the Agency received public comments and suggestions regarding the survey and its associated estimates of burden.

Comments received generally agreed with the Agency's estimates of burden for completion of the survey. However, one commenter stated that the Agency's estimates were

greatly underestimated if sites were required to generate numerous detailed process flow diagrams (PFDs) for each portion of their site. The Agency has now clarified that sites are not required to generate numerous separate PFDs if they already have one or more existing PFDs that provide the required information. In fact, many sites will be able to submit one to two PFDs to cover all operations on site. In addition, EPA clarified that detailed information collected elsewhere in the survey (e.g., individual source flow rates) do not need to be included on the PFD. Attachment 5 presents summaries of, and Agency responses to, all comments received.

Following the notice, the Agency also continued to develop the survey mailing list database, and identified additional iron and steel industry sites that either currently fall under the applicability of the Iron and Steel Manufacturing Effluent Limitations Guidelines and Standards, or may fall under the applicability of the regulation if the applicability is revised. For a description of the types of sites affected by this data collection, as well as the Agency's plan to conduct a census of the industry, please see Section 2(b) of this document. Further discussion on the need for a census of small entities may be found in Section 5(c).

In response to comments from the public, and due to further development of the iron and steel industry mailing list, EPA made modifications to the original survey. These changes are discussed in more detail in Section 3(b)(iii) of this document. To further reduce the burden on the overall industry, EPA then created the Short Survey, Cost Survey, and two follow-up questions that are targeted to a subset of the industry. The revised data collection, entitled the Collection of 1997 Iron and Steel Industry Data, will place a lower level of burden on a majority of the iron and steel industry sites than was anticipated in the October 20, 1997 Federal Register notice (i.e., an average burden of 119 hours versus an average burden of 171 hours).

Because the iron and steel industry will devote time and resources to respond to the Collection of 1997 Iron and Steel Industry Data, the Agency has made significant efforts to minimize the burden that this collection will place on the industry. Members of the Agency's iron and steel effluent guidelines project team share experience with the extensive data collection, maintenance, and analysis activities associated with the development of effluent limitations guidelines and standards. Several of these team members were involved in the development and promulgation of the Iron and Steel Manufacturing Effluent Limitations Guidelines and Standards in 1982, and several other members assisted in the recent administration of the U.S. Environmental Protection Agency 1996 Metal Products and Machinery Industry Phase II Survey. These experienced team members assisted in eliminating redundant, unclear, and unnecessary questions from the Collection of 1997 Iron and Steel Industry Data surveys.

Several members of the Agency's iron and steel effluent guidelines project team share a knowledge of, and experience with, the iron and steel industry. They are familiar with the types of records iron and steel sites keep, and are familiar with the units in which they keep these records. These experienced team members have assisted in making the data collection surveys user-friendly (e.g., by requesting records in the form and units in which many sites have already compiled the information).

The Agency's iron and steel effluent guidelines project team designed the data collection surveys to include many burden-reducing formatting features:

- The Technical Information Help Line number and Internet e-mail address, as well as the Financial and Economic Information Help Line number and Internet e-mail address is clearly displayed on the cover page of each data collection survey, and in the introduction to each survey section. The appropriate Help Line number is also displayed on the first page of all survey sections and subsections, and in every question which requests a PFD. The Agency has displayed the Help Line numbers in a variety of locations throughout the surveys to ensure that all survey respondents will have access to the number, even if a site chooses to separate and distribute a survey among a number of qualified respondents.

- Many questions, including all questions that request PFDs, contain example responses that include all of the requirements. Please refer to Detailed Survey Question 2A-27 and Short Survey Question 3A-8 for examples of this feature.

- Each data collection survey contains many "screener" questions that direct the respondent to skip detailed questions that do not pertain to his or her site. These screeners are often simple questions with "yes" or "no" check box options. Please refer to Detailed Survey Question 1-10.a. and Short Survey Question 1-5.b. for examples of this feature.

- Each subsection of Section 2 pertains to a specific manufacturing process and directs the respondent to skip the subsection if the site does not perform that operation. Please refer to page 2A-1 in both the Detailed and Short Survey for examples of this feature.

- Throughout Section 2 of the Detailed and Short Surveys, respondents are asked to provide data on wet air pollution control (WAPC) systems. If the data on a specific WAPC system has been provided elsewhere in the survey, the respondent must simply indicate where the information has been provided and skip the detailed questions. Please refer to Detailed Survey Question 2A-8.a. and Short Survey Question 2A-12 for examples of this feature.

- Significant terms, such as "all," "each," or "excluding" are capitalized, underlined, and bolded. Please refer to Detailed Survey Question 1-14.b. and Short Survey Question 1-7.b. for examples of this feature.

- Many questions contain check boxes beside a list of responses from which the respondent may choose. The Agency has made a significant effort to identify likely answers to these questions. Please refer to Detailed Survey

Question 2A-8.c. and Short Survey Question 2A-12.b. for examples of this feature.

- A complete list of instructions is provided in the introduction to each data collection survey. In addition, instructions are provided throughout each survey section to repeat requirements and ensure that all respondents at a site will have access to pertinent instructions, even if the survey is separated and distributed among the most qualified respondents. Many questions contain instructions, definitions, and explanations specific to the question. Please refer to Detailed Survey Question 1-17, Short Survey Question 1-8, and Cost Survey Question 3 for examples of this feature.

- Many questions are formatted into easy-to-read tables. Please refer to Detailed and Short Survey Question 3A-4, and Cost Survey Question 3 for examples of this feature.

- If a question spans multiple pages, the instructions for that question are printed on the top of each spanned page. Please refer to Detailed Survey Question 2A-5 and Short Survey Question 1-8 for examples of this feature.

- The survey contains sections which may need to be photocopied and completed a number of times. These sections are formatted with graphic stop symbols to remind the respondent that he or she may have to copy the section before completing it. The stop symbols are accompanied by questions and corresponding instructions to aid the respondent in determining the number of copies he or she must make. In addition, pages that may be copied have a page header for the respondent to number each copy. Please refer to the Detailed Survey page which contains Question 2A-8 and the Short Survey page which contains Question 2A-12 for examples of this feature.

- Respondents with readily-available diagrams or lists may provide these documents in lieu of completing responses to some survey questions, provided the readily-available documents contain all of the information required by the Agency. Please refer to Detailed Survey Question 1-20, Short Survey Question 1-10, and Cost Survey Question 2 for examples of this feature.

- The Detailed and Short Surveys contain a comprehensive list of Definitions for all terms found throughout each survey.

- Questions that request PFDs include a checklist of items to be included on each PFD.

(i) Estimating Respondent Burden Associated with the Detailed Survey

EPA will distribute the Detailed Survey to 244 iron and steel sites, including all integrated steel sites (with and without cokemaking), stand-alone cokemaking sites, non-integrated steel sites (with and without finishing), stand-alone finishing sites, stand-alone hot forming sites, and stand-alone direct-reduced ironmaking (DRI) or sintering sites. The Detailed Survey is modular in nature, and will only include those sections applicable to a site. Table 6-1 summarizes the Detailed Survey sections that are anticipated to make up the response for each type of site.

TABLE 6-1
APPLICABLE DETAILED SURVEY SECTIONS PER TYPE OF INDUSTRY SITE

Type of Industry Site	DETAILED SURVEY SECTION																	
	1	2A	2B	2C	2D	2E	2F	2G	2H	2I	2J	2K	2L	2M	2N	2P	3	4
Integrated steel sites with cokemaking	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X
Integrated steel sites without cokemaking	X		X	X	X		X		X	X	X	X	X	X	X	X	X	X
Stand-alone cokemaking sites	X	X														X		X
Non-integrated steel sites with finishing	X							X	X	X	X	X	X	X	X	X	X	X
Non-integrated steel sites without finishing	X							X	X	X	X	X				X	X	X
Stand-alone finishing sites	X												X	X	X	X	X	X
Stand-alone hot forming sites	X											X	X	X	X	X	X	X
Stand-alone DRI or sintering sites	X		X			X										X	X	X

Note: One non-integrated steel site without finishing will receive Section 2E for direct-reduced ironmaking and one non-integrated steel site with finishing will receive Section 2F for BOF steelmaking.

Tables 6-2 through 6-9 present the average hourly burden associated with all respondent activities necessary to complete the Detailed Survey by type of site. Each of these tables displays the approximate average number of hours by labor category for each respondent activity. Labor categories for Part A of the Detailed Survey include junior engineers, mid-level engineers, managers, legal staff, and clerical staff. Labor categories for Part B of the Detailed Survey include junior accountants, managers, legal staff, and clerical staff. Respondent activities include reading the survey instructions, gathering information and data, completing the survey form, and reviewing survey responses. Each table reflects the assumption that junior engineers, junior accountants, and clerks will devote their time to reading instructions, gathering information, and completing the survey form; mid-level engineers will devote their time to reading instructions, gathering information, completing the survey form, and reviewing survey responses; and managers and legal staff will devote their time to reading instructions and reviewing survey responses.

TABLE 6-2
RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE
INTEGRATED STEEL SITES WITH COKEMAKING OPERATIONS

PART A: TECHNICAL INFORMATION

Survey Section	Respondent Activity	Junior Engineer	Mid-level Engineer	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	2.5	1.5	0.5	0.5	0	5
General Site Information	Gather Information / Data	9.5	6	0	0	1	16.5
	Complete Survey Form	4	1	0	0	1	6
	Review Survey Responses	0	1.5	3	3	0	7.5
Section 2	Read Instructions	32	31	4.5	4.5	2.5	64.5
Manufacturing Process Information	Gather Information / Data	127	85	0	0	9	221
	Complete Survey Form	52.5	14	0	0	12	78.5
	Review Survey Responses	0	21	42.5	42.5	0	106
Section 3	Read Instructions	7	5	1	1	0.5	14.5
Wastewater Treatment Information	Gather Information / Data	28.5	19	0	0	2	49.5
	Complete Survey Form	12	3	0	0	2.5	17.5
	Review Survey Responses	0	4.5	9.5	9.5	0	23.5
Section 4	Read Instructions	2.5	2	0.5	0.5	0	5.5
Wastewater Outfall Information	Gather Information / Data	11	7	0	0	1	19
	Complete Survey Form	4.5	2	0	0	1	7.5
	Review Survey Responses	0	1	3.5	3.5	0	8
Total Burden Per Part A Response (Hours)		**293**	**194.5**	**65**	**65**	**32.5**	**650**

PART B: FINANCIAL AND ECONOMIC INFORMATION

Survey Section	Respondent Activity	Junior Accountant	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	1.5	1	1	1	4.5
Site Identification	Gather Information / Data	1	0	0	0.5	1.5
	Complete Survey Form	0.5	0	0	0.5	1
	Review Survey Responses	0	1	1	0	2
Section 2	Read Instructions	1.5	1	1	1	4.5
Site Financial Information	Gather Information / Data	6	0	0	1	7
	Complete Survey Form	1.5	0	0	1	2.5
	Review Survey Responses	0	3	3	0	6
Section 3	Read Instructions	1	0.5	0.5	0.5	2.5
Business Entity Financial Information	Gather Information / Data	3	0	0	0.5	3.5
	Complete Survey Form	1	0	0	1	2
	Review Survey Responses	0	1.5	1.5	0	3
Section 4	Read Instructions	0.5	0.5	0.5	0.5	2
Corporate Parent Financial Information	Gather Information / Data	0.5	0	0	0.5	1
	Complete Survey Form	0.5	0	0	0.5	1
	Review Survey Responses	0	0.5	0.5	0	1
Total Burden Per Part B Response (Hours)		**18.5**	**9**	**9**	**8.5**	**45**
TOTAL RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE (HOURS)						**695**

TABLE 6-3
RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE
INTEGRATED STEEL SITES WITHOUT COKEMAKING OPERATIONS

PART A: TECHNICAL INFORMATION

Survey Section	Respondent Activity	Junior Engineer	Mid-level Engineer	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	2.5	1.5	0.5	0.5	0	5
General Site Information	Gather Information / Data	9.5	6	0	0	1	16.5
	Complete Survey Form	4	1	0	0	1	6
	Review Survey Responses	0	1.5	3	3	0	7.5
Section 2	Read Instructions	26	17.5	4	4	2	53.5
Manufacturing Process Information	Gather Information / Data	105.5	70	0	0	8	183.5
	Complete Survey Form	44	12	0	0	9.5	65.5
	Review Survey Responses	0	17.5	35	35	0	87.5
Section 3	Read Instructions	7	5	1	1	0.5	14.5
Wastewater Treatment Information	Gather Information / Data	28.5	19	0	0	2	49.5
	Complete Survey Form	12	3	0	0	2.5	17.5
	Review Survey Responses	0	4.5	9.5	9.5	0	23.5
Section 4	Read Instructions	2	1.5	0.5	0.5	0	4.5
Wastewater Outfall Information	Gather Information / Data	8	5	0	0	0.5	13.5
	Complete Survey Form	3.5	1	0	0	1.0	5.5
	Review Survey Responses	0	1.5	2.5	2.5	0	6.5
Total Burden Per Part A Response (Hours)		**252.5**	**167.5**	**56**	**56**	**28**	**560**

PART B: FINANCIAL AND ECONOMIC INFORMATION

Survey Section	Respondent Activity	Junior Accountant	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	1.5	1	1	1	4.5
Site Identification	Gather Information / Data	1	0	0	0.5	1.5
	Complete Survey Form	0.5	0	0	0.5	1
	Review Survey Responses	0	1	1	0	2
Section 2	Read Instructions	1.5	1	1	1	4.5
Site Financial Information	Gather Information / Data	6	0	0	1	7
	Complete Survey Form	1.5	0	0	1	2.5
	Review Survey Responses	0	3	3	0	6
Section 3	Read Instructions	1	0.5	0.5	0.5	2.5
Business Entity Financial Information	Gather Information / Data	3	0	0	0.5	3.5
	Complete Survey Form	1	0	0	1	2
	Review Survey Responses	0	1.5	1.5	0	3
Section 4	Read Instructions	0.5	0.5	0.5	0.5	2
Corporate Parent Financial Information	Gather Information / Data	0.5	0	0	0.5	1
	Complete Survey Form	0.5	0	0	0.5	1
	Review Survey Responses	0	0.5	0.5	0	1
Total Burden Per Part B Response (Hours)		**18.5**	**9**	**9**	**8.5**	**45**
TOTAL RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE (HOURS)						**605**

TABLE 6-4
RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE
STAND-ALONE COKEMAKING SITES

PART A: TECHNICAL INFORMATION

Survey Section	Respondent Activity	Junior Engineer	Mid-level Engineer	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	2	1.5	0.5	0.5	0	4.5
General Site Information	Gather Information / Data	8	5	0	0	0.5	13.5
	Complete Survey Form	3.5	1	0	0	1	5.5
	Review Survey Responses	0	1.5	2.5	2.5	0	6.5
Section 2	Read Instructions	6	4	1	1	0.5	12.5
Manufacturing Process Information	Gather Information / Data	23	15	0	0	1.5	39.5
	Complete Survey Form	9.5	2.5	0	0	2	14
	Review Survey Responses	0	4	7.5	7.5	0	19
Section 3	Read Instructions	0	0	0	0	0	0
Wastewater Treatment Information	Gather Information / Data	0	0	0	0	0	0
	Complete Survey Form	0	0	0	0	0	0
	Review Survey Responses	0	0	0	0	0	0
Section 4	Read Instructions	0.5	0.5	0	0	0	1
Wastewater Outfall Information	Gather Information / Data	3	1.5	0	0	0	4.5
	Complete Survey Form	1	0.5	0	0	0.5	2
	Review Survey Responses	0	0.5	1	1	0	2.5
Total Burden Per Part A Response (Hours)		**56.5**	**37.5**	**12.5**	**12.5**	**6**	**125**

PART B: FINANCIAL AND ECONOMIC INFORMATION

Survey Section	Respondent Activity	Junior Accountant	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	1.5	1	1	1	4.5
Site Identification	Gather Information / Data	1	0	0	0.5	1.5
	Complete Survey Form	0.5	0	0	0.5	1
	Review Survey Responses	0	1	1	0	2
Section 2	Read Instructions	1.5	1	1	1	4.5
Site Financial Information	Gather Information / Data	6	0	0	1	7
	Complete Survey Form	1.5	0	0	1	2.5
	Review Survey Responses	0	3	3	0	6
Section 3	Read Instructions	0	0	0	0	0
Business Entity Financial Information	Gather Information / Data	0	0	0	0	0
	Complete Survey Form	0	0	0	0	0
	Review Survey Responses	0	0	0	0	0
Section 4	Read Instructions	0	0	0	0	0
Corporate Parent Financial Information	Gather Information / Data	0	0	0	0	0
	Complete Survey Form	0	0	0	0	0
	Review Survey Responses	0	0	0	0	0
Total Burden Per Part B Response (Hours)		**12**	**6**	**6**	**5**	**29**
TOTAL RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE (HOURS)						**154**

TABLE 6-5
RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE
NON-INTEGRATED STEEL SITES WITH FINISHING OPERATIONS

PART A: TECHNICAL INFORMATION

Survey Section	Respondent Activity	Junior Engineer	Mid-level Engineer	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	2	1.5	0.5	0.5	0	4.5
General Site Information	Gather Information / Data	8	5	0	0	0.5	13.5
	Complete Survey Form	3.5	1	0	0	1	5.5
	Review Survey Responses	0	1.5	2.5	2.5	0	6.5
Section 2	Read Instructions	16	10.5	2.5	2.5	1	32.5
Manufacturing Process Information	Gather Information / Data	63.5	42.5	0	0	5	111
	Complete Survey Form	26	7	0	0	6	39
	Review Survey Responses	0	10.5	21	21	0	52.5
Section 3	Read Instructions	4	2.5	0.5	0.5	0.5	8
Wastewater Treatment Information	Gather Information / Data	16	11	0	0	1	28
	Complete Survey Form	7	2	0	0	1.5	10.5
	Review Survey Responses	0	2.5	2.5	2.5	0	13.5
Section 4	Read Instructions	1	0.5	0.5	0.5	0	2.5
Wastewater Outfall Information	Gather Information / Data	4	2.5	0	0	0.5	7
	Complete Survey Form	2	0.5	0	0	0.5	3
	Review Survey Responses	0	0.5	1	1	0	2.5
Total Burden Per Part A Response (Hours)		**153**	**101.5**	**34**	**34**	**17.5**	**340**

PART B: FINANCIAL AND ECONOMIC INFORMATION

Survey Section	Respondent Activity	Junior Accountant	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	1.5	1	1	1	4.5
Site Identification	Gather Information / Data	1	0	0	0.5	1.5
	Complete Survey Form	0.5	0	0	0.5	1
	Review Survey Responses	0	1	1	0	2
Section 2	Read Instructions	1.5	1	1	1	4.5
Site Financial Information	Gather Information / Data	6	0	0	1	7
	Complete Survey Form	1.5	0	0	1	2.5
	Review Survey Responses	0	3	3	0	6
Section 3	Read Instructions	1	0.5	0.5	0.5	2.5
Business Entity Financial Information	Gather Information / Data	3	0	0	0.5	3.5
	Complete Survey Form	1	0	0	1	2
	Review Survey Responses	0	1.5	1.5	0	3
Section 4	Read Instructions	0	0	0	0	0
Corporate Parent Financial Information	Gather Information / Data	0	0	0	0	0
	Complete Survey Form	0	0	0	0	0
	Review Survey Responses	0	0	0	0	0
Total Burden Per Part B Response (Hours)		**17**	**8**	**8**	**7**	**40**
TOTAL RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE (HOURS)						**380**

TABLE 6-6
RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE
NON-INTEGRATED STEEL SITES WITHOUT FINISHING OPERATIONS

PART A: TECHNICAL INFORMATION

Survey Section	Respondent Activity	Junior Engineer	Mid-level Engineer	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	2	1.5	0.5	0.5	0	4.5
General Site Information	Gather Information / Data	8	5	0	0	0.5	13.5
	Complete Survey Form	3.5	1	0	0	1	5.5
	Review Survey Responses	0	1.5	2.5	2.5	0	6.5
Section 2	Read Instructions	6.5	4	1	1	0.5	13
Manufacturing Process Information	Gather Information / Data	26	17.5	0	0	1.5	45
	Complete Survey Form	10.5	3	0	0	2.5	16
	Review Survey Responses	0	4	8.5	8.5	0	21
Section 3	Read Instructions	2.5	2	0.5	0.5	0	5.5
Wastewater Treatment Information	Gather Information / Data	11	7	0	0	1	19
	Complete Survey Form	4.5	2	0	0	1	7.5
	Review Survey Responses	0	1	3.5	3.5	0	8
Section 4	Read Instructions	0.5	0.5	0	0	0	1
Wastewater Outfall Information	Gather Information / Data	3	1.5	0	0	0	4.5
	Complete Survey Form	1	0.5	0	0	0.5	2
	Review Survey Responses	0	0.5	1	1	0	2.5
Total Burden Per Part A Response (Hours)		**79**	**52.5**	**17.5**	**17.5**	**8.5**	**175**

PART B: FINANCIAL AND ECONOMIC INFORMATION

Survey Section	Respondent Activity	Junior Accountant	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	1.5	1	1	1	4.5
Site Identification	Gather Information / Data	1	0	0	0.5	1.5
	Complete Survey Form	0.5	0	0	0.5	1
	Review Survey Responses	0	1	1	0	2
Section 2	Read Instructions	1.5	1	1	1	4.5
Site Financial Information	Gather Information / Data	6	0	0	1	7
	Complete Survey Form	1.5	0	0	1	2.5
	Review Survey Responses	0	3	3	0	6
Section 3	Read Instructions	1	0.5	0.5	0.5	2.5
Business Entity Financial Information	Gather Information / Data	3	0	0	0.5	3.5
	Complete Survey Form	1	0	0	1	2
	Review Survey Responses	0	1.5	1.5	0	3
Section 4	Read Instructions	0	0	0	0	0
Corporate Parent Financial Information	Gather Information / Data	0	0	0	0	0
	Complete Survey Form	0	0	0	0	0
	Review Survey Responses	0	0	0	0	0
Total Burden Per Part B Response (Hours)		**17**	**8**	**8**	**7**	**40**
TOTAL RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE (HOURS)						**215**

TABLE 6-7
RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE
STAND-ALONE FINISHING SITES

PART A: TECHNICAL INFORMATION

Survey Section	Respondent Activity	Junior Engineer	Mid-level Engineer	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	2	1.5	0.5	0.5	0	4.5
General Site Information	Gather Information / Data	8	5	0	0	0.5	13.5
	Complete Survey Form	3.5	1	0	0	1	5.5
	Review Survey Responses	0	1.5	2.5	2.5	0	6.5
Section 2	Read Instructions	8	5	1	1	0.5	15.5
Manufacturing Process Information	Gather Information / Data	31	21	0	0	2	54
	Complete Survey Form	13	3.5	0	0	3	19.5
	Review Survey Responses	0	5	10.5	10.5	0	26
Section 3	Read Instructions	2.5	2	0.5	0.5	0	5.5
Wastewater Treatment Information	Gather Information / Data	11	7	0	0	1	19
	Complete Survey Form	4.5	1	0	0	1	6.5
	Review Survey Responses	0	2	3.5	3.5	0	9
Section 4	Read Instructions	1	0.5	0.5	0.5	0	2.5
Wastewater Outfall Information	Gather Information / Data	4	2.5	0	0	0.5	7
	Complete Survey Form	2	0.5	0	0	0.5	3
	Review Survey Responses	0	0.5	1	1	0	2.5
Total Burden Per Part A Response (Hours)		**90.5**	**59.5**	**20**	**20**	**10**	**200**

PART B: FINANCIAL AND ECONOMIC INFORMATION

Survey Section	Respondent Activity	Junior Accountant	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	1.5	1	1	1	4.5
Site Identification	Gather Information / Data	1	0	0	0.5	1.5
	Complete Survey Form	0.5	0	0	0.5	1
	Review Survey Responses	0	1	1	0	2
Section 2	Read Instructions	1.5	1	1	1	4.5
Site Financial Information	Gather Information / Data	6	0	0	1	7
	Complete Survey Form	1.5	0	0	1	2.5
	Review Survey Responses	0	3	3	0	6
Section 3	Read Instructions	0	0	0	0	0
Business Entity Financial Information	Gather Information / Data	0	0	0	0	0
	Complete Survey Form	0	0	0	0	0
	Review Survey Responses	0	0	0	0	0
Section 4	Read Instructions	0	0	0	0	0
Corporate Parent Financial Information	Gather Information / Data	0	0	0	0	0
	Complete Survey Form	0	0	0	0	0
	Review Survey Responses	0	0	0	0	0
Total Burden Per Part B Response (Hours)		**12**	**6**	**6**	**5**	**29**
TOTAL RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE (HOURS)						**229**

TABLE 6-8
RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE
STAND-ALONE HOT FORMING SITES

PART A: TECHNICAL INFORMATION

Survey Section	Respondent Activity	Junior Engineer	Mid-level Engineer	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	2	1.5	0.5	0.5	0	4.5
General Site Information	Gather Information / Data	8	5	0	0	0.5	13.5
	Complete Survey Form	3.5	1	0	0	1	5.5
	Review Survey Responses	0	1.5	2.5	2.5	0	6.5
Section 2	Read Instructions	3.5	2	0.5	0.5	0.5	7
Manufacturing Process Information	Gather Information / Data	13.5	9.5	0	0	0.5	23.5
	Complete Survey Form	5.5	1.5	0	0	1.5	8.5
	Review Survey Responses	0	2	4.5	4.5	0	11
Section 3	Read Instructions	1.5	1	0.5	0.5	0	3.5
Wastewater Treatment Information	Gather Information / Data	5.5	3.5	0	0	0.5	9.5
	Complete Survey Form	2	0.5	0	0	0.5	3
	Review Survey Responses	0	1	1.5	1.5	0	4
Section 4	Read Instructions	0.5	0.5	0	0	0	1
Wastewater Outfall Information	Gather Information / Data	3	1.5	0	0	0	4.5
	Complete Survey Form	1	0.5	0	0	0.5	2
	Review Survey Responses	0	0.5	1	1	0	2.5
Total Burden Per Part A Response (Hours)		**49.5**	**33**	**11**	**11**	**5.5**	**110**

PART B: FINANCIAL AND ECONOMIC INFORMATION

Survey Section	Respondent Activity	Junior Accountant	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	1.5	1	1	1	4.5
Site Identification	Gather Information / Data	1	0	0	0.5	1.5
	Complete Survey Form	0.5	0	0	0.5	1
	Review Survey Responses	0	1	1	0	2
Section 2	Read Instructions	1.5	1	1	1	4.5
Site Financial Information	Gather Information / Data	6	0	0	1	7
	Complete Survey Form	1.5	0	0	1	2.5
	Review Survey Responses	0	3	3	0	6
Section 3	Read Instructions	0	0	0	0	0
Business Entity Financial Information	Gather Information / Data	0	0	0	0	0
	Complete Survey Form	0	0	0	0	0
	Review Survey Responses	0	0	0	0	0
Section 4	Read Instructions	0	0	0	0	0
Corporate Parent Financial Information	Gather Information / Data	0	0	0	0	0
	Complete Survey Form	0	0	0	0	0
	Review Survey Responses	0	0	0	0	0
Total Burden Per Part B Response (Hours)		**12**	**6**	**6**	**5**	**29**
TOTAL RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE (HOURS)						**139**

TABLE 6-9
RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE
STAND-ALONE DIRECT-REDUCED IRONMAKING OR SINTERING SITES

PART A: TECHNICAL INFORMATION

Survey Section	Respondent Activity	Junior Engineer	Mid-level Engineer	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	2	1.5	0.5	0.5	0	4.5
General Site Information	Gather Information / Data	8	5	0	0	0.5	13.5
	Complete Survey Form	3.5	1	0	0	1	5.5
	Review Survey Responses	0	1.5	2.5	2.5	0	6.5
Section 2	Read Instructions	2.5	1.5	0.5	0.5	0	5
Manufacturing Process Information	Gather Information / Data	9.5	6	0	0	1	16.5
	Complete Survey Form	4	1	0	0	1	6
	Review Survey Responses	0	1.5	3	3	0	7.5
Section 3	Read Instructions	1.5	1	0.5	0.5	0	3.5
Wastewater Treatment Information	Gather Information / Data	5.5	3.5	0	0	0.5	9.5
	Complete Survey Form	2	0.5	0	0	0.5	3
	Review Survey Responses	0	1	1.5	1.5	0	4
Section 4	Read Instructions	0.5	0.5	0	0	0	1
Wastewater Outfall Information	Gather Information / Data	3	1.5	0	0	0	4.5
	Complete Survey Form	1	0.5	0	0	0.5	2
	Review Survey Responses	0	0.5	1	1	0	2.5
Total Burden Per Part A Response (Hours)		**43**	**28**	**9.5**	**9.5**	**5**	**95**

PART B: FINANCIAL AND ECONOMIC INFORMATION

Survey Section	Respondent Activity	Junior Accountant	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	1.5	1	1	1	4.5
Site Identification	Gather Information / Data	1	0	0	0.5	1.5
	Complete Survey Form	0.5	0	0	0.5	1
	Review Survey Responses	0	1	1	0	2
Section 2	Read Instructions	1.5	1	1	1	4.5
Site Financial Information	Gather Information / Data	6	0	0	1	7
	Complete Survey Form	1.5	0	0	1	2.5
	Review Survey Responses	0	3	3	0	6
Section 3	Read Instructions	0	0	0	0	0
Business Entity Financial Information	Gather Information / Data	0	0	0	0	0
	Complete Survey Form	0	0	0	0	0
	Review Survey Responses	0	0	0	0	0
Section 4	Read Instructions	0	0	0	0	0
Corporate Parent Financial Information	Gather Information / Data	0	0	0	0	0
	Complete Survey Form	0	0	0	0	0
	Review Survey Responses	0	0	0	0	0
Total Burden Per Part B Response (Hours)		**12**	**6**	**6**	**5**	**29**
TOTAL RESPONDENT AVERAGE BURDEN PER DETAILED SURVEY RESPONSE (HOURS)						**124**

(ii) Estimating Respondent Burden Associated with the Short Survey

EPA will distribute the Short Survey to 657 iron and steel sites, including all stand-alone sites engaged in the manufacture of pipe and tube, stand-alone hot dip coating sites, stand-alone cold forming sites, and stand-alone wire manufacturing sites. Table 6-10 summarizes the Short Survey sections that are anticipated to make up the response for each type of site.

TABLE 6-10
APPLICABLE SHORT SURVEY SECTIONS PER TYPE OF INDUSTRY SITE

Type of Industry Site	SHORT SURVEY SECTION				
	1	2A	2B	2C	3
Stand-alone pipe and tube sites	X	X	X	X	X
Stand-alone hot dip coating sites	X		X	X	X
Stand-alone cold forming sites	X	X	X	X	X
Stand-alone wire sites	X	X	X	X	X

Each of Tables 6-11 through 6-14 displays the approximate average number of hours that each respondent type will spend completing each respondent activity associated with each section of the Short Survey. Respondent types to Part A of the Short Survey include junior engineers, mid-level engineers, managers, legal staff, and clerical staff. Respondent types to Part B of the Short Survey include: junior accountants, managers, legal staff, and clerical staff. Respondent activities include reading the survey instructions, gathering information and data, completing the survey form, and reviewing survey responses. Each table reflects the assumption that junior engineers, junior accountants, and clerks will devote their time to reading instructions, gathering information and completing the survey form; mid-level engineers will devote their time to reading instructions, gathering information, completing the survey form and reviewing survey responses; and managers and legal staff will devote their time to reading instructions and reviewing survey responses.

TABLE 6-11
RESPONDENT AVERAGE BURDEN PER SHORT SURVEY RESPONSE
STAND-ALONE PIPE AND TUBE SITES

PART A: TECHNICAL INFORMATION

Survey Section	Respondent Activity	Junior Engineer	Mid-level Engineer	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	0.5	0.5	0	0	0	1
General Site Information	Gather Information / Data	0.5	0	0	0	0	0.5
	Complete Survey Form	1	0.5	0	0	0.5	2
	Review Survey Responses	0	0.5	0.5	0.5	0	1.5
Section 2	Read Instructions	2.5	2	0.5	0.5	0	5.5
Manufacturing Process Information	Gather Information / Data	11	7	0	0	1	19
	Complete Survey Form	4.5	1	0	0	1	6.5
	Review Survey Responses	0	2	3.5	3.5	0	9
Section 3	Read Instructions	1.5	1	0.5	0.5	0.5	4
Wastewater Treatment and Outfall Information	Gather Information / Data	6.5	4.5	0	0	0.5	11.5
	Complete Survey Form	3	1	0	0	0.5	4.5
	Review Survey Responses	0	1	2	2	0	5
Total Burden Per Part A Response (Hours)		**31**	**21**	**7**	**7**	**4**	**70**

PART B: FINANCIAL AND ECONOMIC INFORMATION

Survey Section	Respondent Activity	Junior Accountant	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	1	1	0.5	0	2.5
Economic/Financial Data	Gather Information / Data	1	0	0	0	1
	Complete Survey Form	0	0	0	1	1
	Review Survey Responses	0	1	0.5	0	1.5
Total Burden Per Part B Response (Hours)		**2**	**2**	**1**	**1**	**6**
TOTAL RESPONDENT AVERAGE BURDEN PER SHORT SURVEY RESPONSE (HOURS)						**76**

TABLE 6-12
RESPONDENT AVERAGE BURDEN PER SHORT SURVEY RESPONSE
STAND-ALONE HOT DIP COATING SITES

PART A: TECHNICAL INFORMATION

Survey Section	Respondent Activity	Junior Engineer	Mid-level Engineer	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	0.5	0.5	0	0	0	1
General Site Information	Gather Information / Data	0.5	0	0	0	0	0.5
	Complete Survey Form	1	0.5	0	0	0.5	2
	Review Survey Responses	0	0.5	0.5	0.5	0	1.5
Section 2	Read Instructions	1.5	1	0.5	0.5	0	3.5
Manufacturing Process Information	Gather Information / Data	5.5	3.5	0	0	0.5	9.5
	Complete Survey Form	2	0.5	0	0	0.5	3
	Review Survey Responses	0	1	1.5	1.5	0	4
Section 3	Read Instructions	1	0.5	0.5	0.5	0	2.5
Wastewater Treatment and Outfall Information	Gather Information / Data	4	2.5	0	0	0.5	7
	Complete Survey Form	2	0.5	0	0	0.5	3
	Review Survey Responses	0	0.5	1	1	0	2.5
Total Burden Per Part A Response (Hours)		**18**	**11.5**	**4**	**4**	**2.5**	**40**

PART B: FINANCIAL AND ECONOMIC INFORMATION

Survey Section	Respondent Activity	Junior Accountant	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	1	1	0.5	0	2.5
Economic/Financial Data	Gather Information / Data	1	0	0	0	1
	Complete Survey Form	0	0	0	1	1
	Review Survey Responses	0	1	0.5	0	1.5
Total Burden Per Part B Response (Hours)		**2**	**2**	**1**	**1**	**6**
TOTAL RESPONDENT AVERAGE BURDEN PER SHORT SURVEY RESPONSE (HOURS)						**46**

TABLE 6-13
RESPONDENT AVERAGE BURDEN PER SHORT SURVEY RESPONSE
STAND-ALONE COLD FORMING SITES

PART A: TECHNICAL INFORMATION

Survey Section	Respondent Activity	Junior Engineer	Mid-level Engineer	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	0.5	0.5	0	0	0	1
General Site Information	Gather Information / Data	0.5	0	0	0	0	0.5
	Complete Survey Form	1	0.5	0	0	0.5	2
	Review Survey Responses	0	0.5	0.5	0.5	0	1.5
Section 2	Read Instructions	2.5	2	0.5	0.5	0	5.5
Manufacturing Process Information	Gather Information / Data	11	7	0	0	1	19
	Complete Survey Form	4.5	1	0	0	1	6.5
	Review Survey Responses	0	2	3.5	3.5	0	9
Section 3	Read Instructions	2	1.5	0.5	0.5	0	4.5
Wastewater Treatment and Outfall Information	Gather Information / Data	8	5	0	0	0.5	13.5
	Complete Survey Form	3.5	1	0	0	1	5.5
	Review Survey Responses	0	1.5	2.5	2.5	0	6.5
Total Burden Per Part A Response (Hours)		**33.5**	**22.5**	**7.5**	**7.5**	**4**	**75**

PART B: FINANCIAL AND ECONOMIC INFORMATION

Survey Section	Respondent Activity	Junior Accountant	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	1	1	0.5	0	2.5
Economic/Financial Data	Gather Information / Data	1	0	0	0	1
	Complete Survey Form	0	0	0	1	1
	Review Survey Responses	0	1	0.5	0	1.5
Total Burden Per Part B Response (Hours)		**2**	**2**	**1**	**1**	**6**
TOTAL RESPONDENT AVERAGE BURDEN PER SHORT SURVEY RESPONSE (HOURS)						**81**

TABLE 6-14
RESPONDENT AVERAGE BURDEN PER SHORT SURVEY RESPONSE
STAND-ALONE WIRE SITES

PART A: TECHNICAL INFORMATION

Survey Section	Respondent Activity	Junior Engineer	Mid-level Engineer	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	0.5	0.5	0	0	0	1
General Site Information	Gather Information / Data	0.5	0	0	0	0	0.5
	Complete Survey Form	1	0.5	0	0	0.5	2
	Review Survey Responses	0	0.5	0.5	0.5	0	1.5
Section 2	Read Instructions	2	1.5	0.5	0.5	0	4.5
Manufacturing Process Information	Gather Information / Data	8	5	0	0	0.5	13.5
	Complete Survey Form	3.5	1	0	0	1	5.5
	Review Survey Responses	0	1.5	2.5	2.5	0	6.5
Section 3	Read Instructions	1	0.5	0.5	0.5	0	2.5
Wastewater Treatment and Outfall Information	Gather Information / Data	4	2.5	0	0	0.5	7
	Complete Survey Form	2	0.5	0	0	0.5	3
	Review Survey Responses	0	0.5	1	1	0	2.5
Total Burden Per Part A Response (Hours)		**22.5**	**14.5**	**5**	**5**	**3**	**50**

PART B: FINANCIAL AND ECONOMIC INFORMATION

Survey Section	Respondent Activity	Junior Accountant	Manager	Legal Support	Clerical Support	Total Burden Per Activity (Hours)
Section 1	Read Instructions	1	1	0.5	0	2.5
Economic/Financial Data	Gather Information / Data	1	0	0	0	1
	Complete Survey Form	0	0	0	1	1
	Review Survey Responses	0	1	0.5	0	1.5
Total Burden Per Part B Response (Hours)		**2**	**2**	**1**	**1**	**6**
TOTAL RESPONDENT AVERAGE BURDEN PER SHORT SURVEY RESPONSE (HOURS)						**56**

(iii) Estimating Respondent Burden Associated with the Cost Survey and Follow-up Questions

EPA will distribute the Cost Survey to no more than 100 iron and steel industry sites. The Cost Survey is designed to collect detailed capital cost information regarding wastewater treatment systems implementing candidate control technologies. Projects of interest will be selected during the analysis of data collected through both the Detailed Survey and the Short Survey, and the Agency will distribute the Cost Survey at that time. EPA estimates that sites will be asked to provide data on one to two projects at the site.

EPA will distribute the production follow-up question to no more than 100 iron and steel industry sites. The production follow-up question is designed to collect production operating hours from sites that are candidates to evaluate the production basis for the regulation as implemented by iron and steel industry permit writers. Candidate sites for the follow-up will be identified during the analysis of data collected through both the Detailed Survey and the Short Survey.

EPA will distribute the analytical data follow-up question to no more than 100 iron and steel industry sites. The analytical data follow-up question is designed to collect analytical data from sites possessing data useful to characterize raw wastewaters and treated effluent streams in the iron and steel industry. Candidate sites for the analytical data follow-up question will be identified during the analysis of the analytical data summary information collected through both the Detailed Survey and the Short Survey.

Table 6-15 displays the approximate average number of hours by labor category for completion of the Cost Survey and Follow-up Questions. Labor categories associated with these responses include junior engineers, mid-level engineers, engineering managers, lawyers, and clerical staff. The table reflects the assumption that each site will require 12 hours to complete the Cost Survey, 10 hours to complete the production follow-up question, and 10 hours to complete the analytical data follow-up question.

TABLE 6-15
RESPONDENT AVERAGE BURDEN PER COST SURVEY RESPONSE

Survey or Question	Junior Engineer	Mid-level Engineer	Manager	Legal Support	Clerical Support	Total Burden (Hours)
Burden Per Cost Survey Response (Hours)	0	7	3	1	1	12
Burden Per Production Follow-up Response (Hours)	2	5	2	1	0	10
Burden Per Analytical Data Follow-up Response (Hours)	6	0	2	1	1	10

6(b) ESTIMATING RESPONDENT COSTS

The Agency obtained mean labor rates for each iron and steel industry respondent type from the May 1997, U.S. Department of Labor, Bureau of Labor Statistics: *1996 National Occupational Employment and Wage Data* publication. To derive the 1997 hourly total compensation rates, the Agency adjusted the mean labor rates by the appropriate U.S. Department of Labor, Bureau of Labor Statistics: Employment Cost Index (ECI) inflator.

Because respondents to the data collection surveys will be required to photocopy survey sections and mail survey responses, the Agency does expect the iron and steel industry to incur operating and maintenance costs to respond to the Collection of 1997 Iron and Steel Industry Data. The Agency assumed a photocopying rate of $0.10 per copy. To determine the survey mailing rate of $7.50 per pound, the Agency assumed that site respondents will return completed surveys via Federal Express economy delivery or a comparable economy delivery carrier that requires a signature to acknowledge receipt of delivery.

Because survey respondents will not be required to purchase any goods, including equipment or machinery, to respond to the Collection of 1997 Iron and Steel Industry Data, the Agency does not expect capital costs to result from the administration of the data collection surveys.

(i) Estimating Respondent Costs Associated with the Detailed Survey

Table 6-16 presents the approximate average labor cost that each type of site will incur to respond to the Detailed Survey. The Agency derived the values in Table 6-16 by summing the "Total Burden Per Part A Response (Hours)" and "Total Burden Per Part B Response (Hours)" fields in each of Tables 6-2 through 6-9, multiplying the sum for each respondent type by the associated hourly total compensation rate, and rounding to the nearest dollar.

TABLE 6-16
AVERAGE LABOR COSTS PER DETAILED SURVEY RESPONSE

Site Type	Junior Engineer	Mid-level Engineer	Junior Accountant	Engineering Manager	Financial manager	Legal Support	Clerical Support	Labor Cost per Detailed Survey Response
	$23.50/hr	$39.82/hr	$18.40/hr	$51.62/hr	$51.62/hr	$51.97/hr	$18.26/hr	
Integrated steel sites with cokemaking	$6,886	$7,745	$340	$3,355	$465	$3,846	$749	$23,385
Integrated steel sites without cokemaking	$5,934	$6,670	$340	$2,891	$465	$3,378	$666	$20,344
Stand-alone cokemaking sites	$1,328	$1,493	$221	$645	$310	$961	$201	$5,159
Non-integrated steel sites with finishing	$3,596	$4,042	$313	$1,755	$413	$2,183	$447	$12,748
Non-integrated steel sites without finishing	$1,857	$2,091	$313	$903	$413	$1,325	$183	$7,084
Stand-alone finishing sites	$2,127	$2,369	$221	$1,032	$310	$1,351	$274	$7,684
Stand-alone hot forming sites	$1,163	$1,314	$221	$568	$310	$883	$192	$4,651
Stand-alone DRI or sintering sites	$1,011	$1,115	$221	$490	$310	$806	$183	$4,135

Table 6-17 presents the one-time operating and maintenance cost that each type of site will incur to respond to the Detailed Survey. The Agency derived the photocopying values in Table 6-17 by estimating the total number of page copies and section copies each type of site will be required to complete, based on the number and types of processes and systems generally present at each type of site. In addition, EPA estimated the total number of photocopies each type of site would be required to make to retain a copy of the completed survey response. To determine the survey response mailing values, the Agency estimated the weight of the total number of pages that each type of site will deliver in its survey response to the Agency.

TABLE 6-17
AVERAGE OPERATING AND MAINTENANCE COSTS PER DETAILED SURVEY RESPONSE

Site Type	Section Photocopies	Survey Mailing	Total O&M Cost per Detailed Survey Response
	$.10 each	$7.50/lb	
Integrated steel sites with cokemaking	$144	$113	$256
Integrated steel sites without cokemaking	$126	$98	$224
Stand-alone cokemaking sites	$42	$38	$80
Non-integrated steel sites with finishing	$82	$68	$149
Non-integrated steel sites without finishing	$53	$45	$98
Stand-alone finishing sites	$32	$30	$62
Stand-alone hot forming sites	$27	$23	$49
Stand-alone DRI or sintering sites	$21	$23	$43

(ii) Estimated Respondent Costs Associated with the Short Survey

Table 6-18 presents the approximate average labor cost that each type of site will incur to respond to the Short Survey. The Agency derived the values in Table 6-18 by summing the "Total Burden Per Part A Response (Hours)" and "Total Burden Per Part B Response (Hours)" fields in each of Tables 6-11 through 6-14, multiplying the sum for each respondent type by the associated hourly total compensation rate, and rounding to the nearest dollar.

TABLE 6-18 AVERAGE LABOR COSTS PER SHORT SURVEY RESPONSE								
Site Type	**Junior Engineer**	**Mid-level Engineer**	**Junior Accountant**	**Engineering Manager**	**Financial Manager**	**Legal Support**	**Clerical Support**	**Labor Cost per Short Survey Response**
	$23.50/hr	$39.82/hr	$18.40/hr	$51.62/hr	$51.62/hr	$51.97/hr	$18.26/hr	
Stand-alone pipe and tube sites	$729	$836	$37	$361	$103	$416	$91	$2,573
Stand-alone hot dip coating sites	$423	$458	$37	$206	$103	$260	$64	$1,551
Stand-alone cold forming sites	$787	$896	$37	$387	$103	$442	$91	$2,743
Stand-alone wire sites	$529	$577	$37	$258	$103	$312	$73	$1,889

Table 6-19 presents the one-time operating and maintenance cost that each type of site will incur to respond to the Short Survey. The Agency derived the photocopying values in Table 6-19 by estimating the total number of page copies and section copies each type of site will be required to complete, based on the number and types of processes and systems generally present at each type of site. In addition, EPA estimated the total number of photocopies each type of site would be required to make to retain a copy of the completed survey response. To determine the survey response mailing values, the Agency estimated the weight of the total number of pages that each type of site will deliver in its survey response to the Agency.

TABLE 6-19 AVERAGE OPERATING AND MAINTENANCE COSTS PER SHORT SURVEY RESPONSE			
Site Type	**Section Photocopies**	**Survey Mailing**	**Total O&M Cost per Short Survey Response**
	$.10 each	$7.50/lb	
Stand-alone pipe and tube sites	$20	$15	$35
Stand-alone hot dip coating sites	$14	$15	$29
Stand-alone cold forming sites	$20	$15	$35
Stand-alone wire sites	$13	$15	$28

(iii) Estimated Respondent Costs Associated with the Cost Survey, Production Follow-up Question and Analytical Data Follow-up Question

Table 6-20 presents the approximate average labor cost that sites will incur to respond to the Cost Survey, the production follow-up question, and the analytical data follow-up question. The Agency derived the values in Table 6-20 by multiplying the sum of total burden for each respondent type by the associated hourly total compensation rate, and rounding to the nearest dollar.

TABLE 6-20 AVERAGE LABOR COSTS PER SURVEY OR QUESTION RESPONSE						
Survey or Question	**Junior Engineer**	**Mid-level Engineer**	**Engineering Manager**	**Legal Support**	**Clerical Support**	**Labor Cost per Response**
	$23.50/hr	$39.82/hr	$51.62/hr	$51.97/hr	$18.26/hr	
Cost Survey	$0	$279	$155	$52	$18	$504
Production follow-up	$47	$199	$103	$52	$0	$401
Analytical data follow-up	$141	$0	$103	$52	$18	$314

Table 6-21 presents the one-time operating and maintenance cost that each type of site will incur to respond to the Cost Survey, the production follow-up question, and the analytical data follow-up question. The Agency derived the photocopying values in Table 6-21 by estimating the total number of page copies and section copies each type of site will be required to complete, based on the number and types of processes and systems generally present at each type of site. In addition, EPA estimated the total number of photocopies each type of site would be required to make to retain a copy of the completed survey response. To determine the survey response mailing values, the Agency estimated the weight of the total number of pages that each type of site will deliver in its survey response to the Agency.

TABLE 6-21 AVERAGE OPERATING AND MAINTENANCE COSTS PER SURVEY OR QUESTION RESPONSE			
Survey or Question	**Section Photocopies**	**Survey Mailing**	**Total O&M Cost per Response**
	$.10 each	$7.50/lb	
Cost survey	$1	$8	$9
Production follow-up	$1	$8	$9
Analytical data follow-up	$10	$8	$18

6(c) ESTIMATING AGENCY BURDEN AND COST

Table 6-22 presents an estimate of the burden that EPA will incur to administer the Collection of 1997 Iron and Steel Industry Data. The table identifies the collection administration tasks to be performed by Agency employees and contractors, and the associated hours required for each grouping of related tasks. EPA determined Agency labor costs by multiplying Agency burden figures by the hourly Agency labor rate of $47.63. EPA determined this rate by dividing the 1997 GS-13, Step 5 rate for the Washington-Baltimore Area of $61,913 by a man-year of 2,080 hours, and then multiplying the result by a benefits multiplication factor of 1.6. EPA determined contractor labor costs by multiplying contractor burden figures by a contractor labor rate of $50. This rate is consistent with current Agency contracts.

Table 6-22 also includes estimates of the one-time operating and maintenance costs associated with printing, photocopying, and postage. EPA estimated these costs based on experience with similar collections.

TABLE 6-22
AGENCY BURDEN AND COST (INCLUDING CONTRACTOR COST)

Activities	Agency Burden (Hours)	Agency O&M (Dollars)	Total Agency Cost	Contractor Burden (Hours)	Contractor O&M (Dollars)	Total Contractor Cost
	$47.63/hr			$50.00/hr		
Develop the collection mechanism; Provide the draft collection mechanism to industry trade associations for review; Meet with trade association representatives; Publish notice of anticipated ICR in Federal Register; Respond to all comments received; Revise data collection mechanism based on comments from reviewers.	1,368		$65,158	6,100		$305,000
Develop a mailing list database; Develop a system to track mailing and receipt activities; Mail data collection surveys.	277		$13,194	1,420		$71,000
Develop and maintain Help Line and Internet address.	288		$13,717	590		$29,500
Maintain response tracking system; Implement appropriate procedures for handling CBI responses; Review and code responses; Collect missing information.	1,408		$67,063	22,880		$1,144,000
Enter and verify data.	704		$33,532	3,375		$168,750
TOTAL BURDEN AND COST	**4,045**	**$7,228**	**$192,664**	**34,365**	**$5,200**	**$1,718,250**

6(d) ESTIMATING RESPONDENT TOTAL BURDEN AND COSTS

Table 6-23 presents the total respondent burden and costs that will result from the administration of the Collection of 1997 Iron and Steel Industry Data. The "Total Number of Responses" fields present the number of survey copies the Agency will administer to each type of site. The Agency derived a total respondent burden in hours for each respondent type by multiplying the number of surveys that will be administered to each respondent type by the "Total Respondent Burden per Survey Response (Hours)" field in each of the corresponding Tables 6-2 through 6-9 and Tables 6-11 through 6-15. The Agency derived a total respondent burden in dollars for each respondent type by multiplying the number of surveys that will be administered to each respondent type by each corresponding "Labor Cost per Survey Response" field in Tables 6-16, 6-18, and 6-20. The Agency derived a total O&M cost for each respondent type by multiplying the number of sites grouped under each respondent type by the corresponding "Total O&M Cost per Survey Response" field in Tables 6-17, 6-19, and 6-21.

TABLE 6-23
COLLECTION OF 1997 IRON AND STEEL INDUSTRY DATA
TOTAL RESPONDENT BURDEN AND COSTS

DETAILED SURVEY	Total Number of Responses	Total Respondent Burden (Hours)	Total Respondent Burden (Dollars)	Total O&M Cost (Dollars)	Total Cost (Dollars)
Integrated steel sites with cokemaking	10	6,950	$233,850	$2,560	$236,410
Integrated steel sites without cokemaking	11	6,655	$223,784	$2,464	$226,248
Stand-alone cokemaking sites	18	2,772	$92,862	$1,440	$94,302
Non-integrated steel sites with finishing	32	12,160	$407,936	$4,768	$412,704
Non-integrated steel sites without finishing	95	20,425	$672,980	$9,310	$682,290
Stand-alone finishing sites	35	8,015	$268,940	$2,170	$271,110
Stand-alone hot forming sites	40	5,560	$186,040	$1,960	$188,000
Stand-alone DRI or sintering sites	3	372	$12,405	$129	$12,534
Total for Detailed Survey	**244**	**62,909**	**$2,098,797**	**$24,801**	**$2,123,598**
SHORT SURVEY	**Total Number of Responses**	**Total Respondent Burden (Hours)**	**Total Respondent Burden (Dollars)**	**Total O&M Cost (Dollars)**	**Total Cost (Dollars)**
Stand-alone pipe and tube sites	179	13,604	$460,567	$6,265	$466,832
Stand-alone hot dip coating sites	109	5,014	$169,059	$3,161	$172,220
Stand-alone cold forming sites	69	5,589	$189,267	$2,415	$191,682
Stand-alone wire drawing sites	300	16,800	$566,700	$8,400	$575,100
Total for Short Survey	**657**	**41,007**	**$1,385,593**	**$20,241**	**$1,405,834**
COST SURVEY AND FOLLOW-UP QUESTIONS	**Total Number of Responses**	**Total Respondent Burden (Hours)**	**Total Respondent Burden (Dollars)**	**Total O&M Cost (Dollars)**	**Total Cost (Dollars)**
Cost survey	100	1,200	$50,400	$900	$51,300
Production follow-up	100	1,000	$40,100	$800	$40,900
Analytical data follow-up	100	1,000	$31,400	$1,800	$33,200
Total for Follow-up	**300**	**3,200**	**$121,900**	**$3,500**	**$125,400**
INDUSTRY TOTAL	**1,201***	**107,116**	**$3,606,290**	**$48,542**	**$3,654,832**

*The Collection of 1997 Iron and Steel Industry Data will affect a total of 901 sites. Up to 300 sites will receive the Cost Survey and/or Follow-up Questions.

6(e) BOTTOM LINE BURDEN HOURS AND COST TABLES

Tables 6-24 and 6-25 summarize the total costs that the iron and steel industry and the Agency will incur as a result of the Collection of 1997 Iron and Steel Industry Data administration.

TABLE 6-24
TOTAL ESTIMATED RESPONDENT BURDEN AND COST SUMMARY

Number of Respondents	Total Burden (Hours)	Total Labor Cost	Total O&M Cost	Total Cost
901	107,116	$3,606,290	$48,542	$3,654,832

TABLE 6-25
TOTAL ESTIMATED AGENCY BURDEN AND COST SUMMARY

Total Burden (Hours)	Total Labor Cost	Total O&M Cost	Total Cost
38,410	$1,910,913	$12,428	$1,923,341

6(f) REASONS FOR CHANGE IN BURDEN

Because the Collection of 1997 Iron and Steel Industry Data Information Collection Request is not associated with the renewal or modification of any existing ICR, the burden estimate associated with this survey does not represent a change in any existing ICR burden estimate.

6(g) BURDEN STATEMENT

Table 6-26 displays the average hourly burden that iron and steel industry sites will incur to respond to the Detailed Survey, the Short Survey, the Cost Survey, and Follow-up Questions.

TABLE 6-26 AVERAGE RESPONDENT BURDEN	
	Burden (Hours)
Detailed survey	258
Short survey	62
Cost survey	12
Production follow-up	10
Analytical data follow-up	10

The one-time public reporting and record keeping burden for this collection is estimated to be 119 hours per response (i.e., a total of 107,116 hours of burden divided among the 901 respondents). Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, OPPE Regulatory Information Division, U.S. Environmental Protection Agency (2137), 401 M St., SW, Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503. Attention: Desk Officer for EPA. Include the EPA ICR number and the OMB control number in any correspondence.